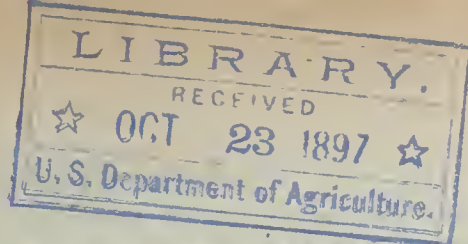


Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



Entered at the Post Office at Chicago, Ill., for transmission through the mails at second-class rates.

A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

Vol. XVI.

CHICAGO, ILLINOIS, SEPTEMBER 15, 1897.

No. 3.

ONE DOLLAR PER ANNUM.
SINGLE COPY, TEN CENTS.

Excelsior Grain-Cleaning Machinery

CONSISTING OF THE

EXCELSIOR Dustless Warehouse and Elevator Separator,
EXCELSIOR Oat Clipper, EXCELSIOR Separator and Grader,
EXCELSIOR "Combined Grain Machine."

ALSO

PEASE DUSTLESS SEPARATORS and WAREHOUSE FANNING MILLS,
POWER CAR PULLERS, GASOLINE ENGINES, STEAM ENGINES, HORSE POWERS
POWER TRANSMISSION MACHINERY,
GENERAL MILL AND ELEVATOR SUPPLIES.

E. H. PEASE MFG. CO., RACINE, WISCONSIN.

Headquarters for
SHAFTING, HANGERS, PULLEYS,
GEARS, SPROCKET WHEELS,
"Sweep" and "Tread" Horse Powers,
Elevator "Boots," "Heads," "Buckets,"
FEED GRINDERS,
Special Flax Mills; Single, Double and
Quadruple Flax Reels.
..... BELTING
"Platform," "Hopper" and "Dump"
Scales, Flexible Loading Spouts,
Corn Shellers, all kinds of FITTINGS,
SUPPLIES and MACHINERY for
Elevators and Mills.
Elevator Equipments a Specialty.

ADDRESS

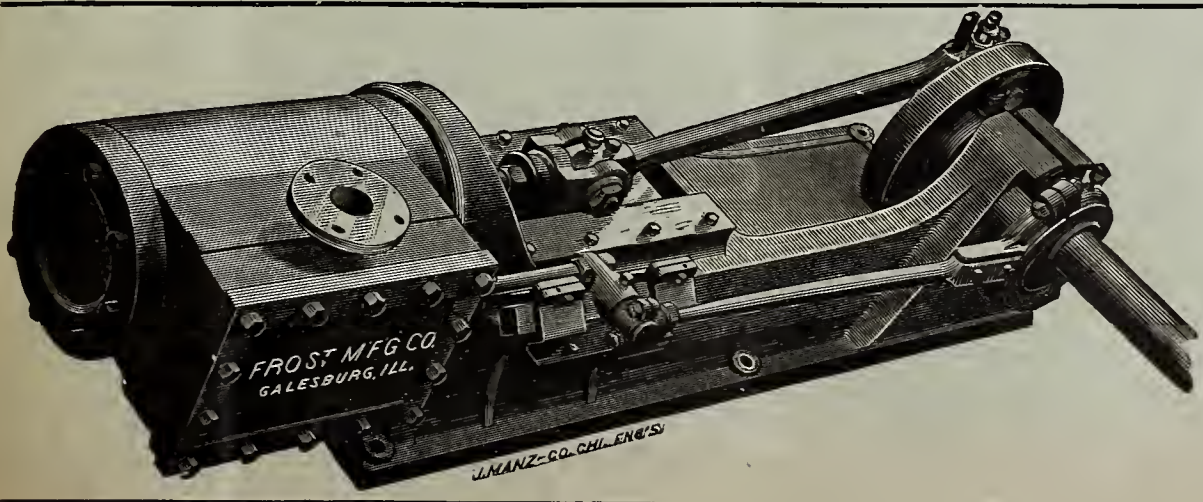
GALDWELL
CONVEYOR
HORSE POWERS
WIRE ROPE
BELT TIGHTENERS

MILL AND ELEVATOR MACHINERY
ELEVATOR BOOTS
ELEVATOR BUCKETS
ELEVATOR BOLTS
BELTING AND ROPE TRANSMISSION
SHEAVE WHEELS
SHAFTING, HANGERS
SPROCKET WHEELS



SEND FOR CATALOGUE

THORNBURGH-
CREEL CO.,
245-247 S. Jefferson St.,
CHICAGO, ILL.



FOR PRICES AND DISCOUNTS
—ON—
Elevator Machinery
AND SUPPLIES
—OF—
Every Description,
EITHER STEAM OR HORSE-POWER,
ADDRESS
THE FROST MFG. CO.,
GALESBURG, ILL.

THE PAINE-ELLIS GRAIN DRIER

Several Patents Pending. \$50 Reward for First Notice of Infringement.

NOTE THESE RESULTS:

No grade corn containing .07½ per ct. excess dampness dried and ventilated in 55 minutes. | No grade wheat containing .07½ per ct. excess dampness dried and ventilated in 60 minutes.

A GRAIN DRIER THAT WILL DRY.

OUR apparatus consists of a drying box or bin with alternate grain and air spaces arranged perpendicularly, and a steam coil and fan for driving hot and then cold air through the grain. Must and other odors are almost entirely eliminated by this process. The drier as well as the fan and steam coil are self-contained so that the entire apparatus can easily be set up and connected with a steam plant. We are prepared to furnish driers of 50, 100 and 200 bushels' capacity, and as they can, as a rule, be filled and emptied hourly, their capacity ranges from 1,200 to 4,800 bushels of dry grain in twenty-four hours. Larger driers will be constructed when required. The steam power required is about ten horse to every hundred bushels' capacity.

We will sell the apparatus at the cost of construction and charge a royalty for its operation; or will retain ownership and charge an increased royalty.

Every country elevator should be equipped with one of these driers so that grain may be sent to market in safe and salable condition.

For terms and further information write

PAINE-ELLIS GRAIN DRIER COMPANY,

28 Chamber of Commerce, Milwaukee, Wis.

Gold Dollars



At FIFTY CENTS apiece are CHEAP, but they do not represent a better investment than we offer the "elevator and grain trade" in our

Controllable Wagon Dump.

WINCHESTER, ILL., February 4, 1896.

MESSRS. SAVAGE & LOVE CO., Rockford, Ill.
GENTLEMEN:—Your favor of the 28th ult. received and noted. Last July I put one of your Controllable Wagon Dumps in a Fairbanks, Morse & Co.'s 22-ft. scale, and it has given me entire satisfaction in every respect. In this locality the bulk of grain is as yet handled in sacks, and by tipping the Dump about one-half it makes a nice slant, making it very easy to pull the sacks to back end of wagon, where strings are cut and grain runs out into bin below. Every farmer, without exception, speaks in glowing terms of the merits of this Dump. In unloading loose grain from wagon there is no dump that will equal yours in being easily handled and always under control of operator. No scaring horses, no dropping of wagon and no noise. I consider a grain elevator incomplete without the Savage & Love Controllable Wagon Dumps.

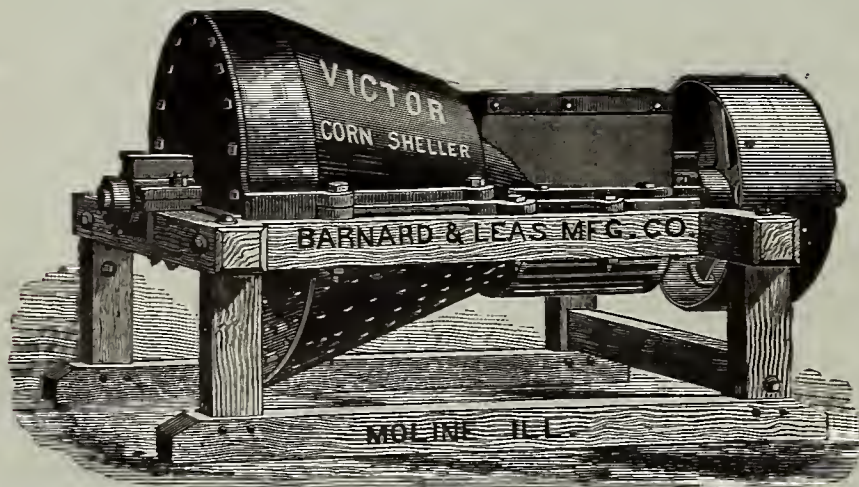
Yours truly,
M. C. WOODWORTH.

MANUFACTURED ONLY BY

THE SAVAGE & LOVE CO., Rockford, Ill.

FAIRBANKS, MORSE & CO., St. Paul, Minn., Northwestern Agents.

CORN, CORN, CORN.



Barnard's New Horizontal Adjustable Warehouse Scourer

IS THE BEST SCOURER IN USE.

Of Large Capacity. It is also the Best Oat Clipper in Use.

Write for further information to

BARNARD & LEAS MFG. CO., MOLINE, ILL.

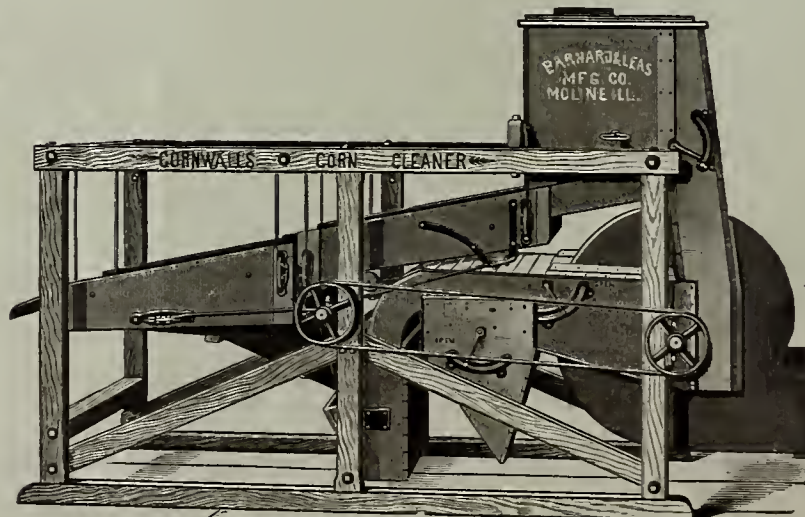
The best outfit for shelling it is the

VICTOR SHELLER,

And the best cleaner the

CORNWALL CORN CLEANER.

We guarantee them to clean the corn for market cleaner than any other outfit on earth.





Smutty and Grown Wheat

There will be large quantities of smutty and grown wheat this year. Elevator owners, to successfully handle this class of grain, must have cleaning machines especially adapted for this work. Owing to the peculiar construction of our scouring cases and cylinders in our late improved "EUREKA" HORIZONTAL AND UPRIGHT CLOSE SCOURERS, we have the only machine made that will successfully handle smutty and grown wheat.

Machines built in capacities from 5 to 1,000 bushels per hour sent on trial and guaranteed to do the work, or may be returned at our expense.

Also remember that we build the latest and best Oat Clipper and the best Warehouse and Elevator Separator.

We also build the latest improved Zig-Zag Separator for separating wheat from oats, etc. Write and see what we can do for you in this line.

Write for Prices.

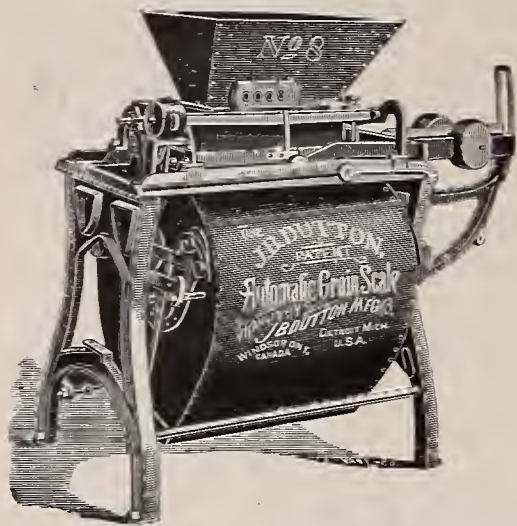
.....

The S. Howes Co.,

"Eureka Works,"

Silver Creek, New York.





J. B. DUTTON'S Patent Automatic Grain Scale.

FOR USE IN

ELEVATORS, DISTILLERIES, MALT HOUSES, FLOUR MILLS, ETC.

ACCURATE AND RELIABLE AT ALL TIMES. SCALES SENT ON 30 DAYS' TRIAL.
SEND FOR CIRCULAR AND PRICE LIST.

Address

J. B. DUTTON, 1026 and 1028 Scotten Ave., DETROIT, MICH.

The Grainman's Actuary.

Showing at a glance the cost of from 1 to 50,000 bushels at any price from 1-8 of a cent to \$1.00 a bushel. Prices run through the books in an indexed form: can find any price and amount quickly. It also shows at a glance the cost of fractional parts of bushels at the following prices:

**WHEAT FROM 40c TO \$1.00 PER BUSHEL.
EAR CORN FROM 10c TO 50c PER BUSHEL.**

**SHELLED CORN FROM 10c TO 50c PER BUSHEL.
OATS FROM 10c TO 40c PER BUSHEL.**

IT IS THE MOST COMPLETE, ACCURATE AND CONVENIENT BOOK EVER ISSUED.
ITS USE WILL SAVE TIME AND LABOR AND INSURE ACCURACY.

BALTIMORE, April 26, 1897.
Mr. HENRY NOBBE, Farmersville, Ill.:
DEAR SIR:—Your esteemed favor of the 23d to hand and noted. Accept thanks for the supplement furnished us. We find your Actuary all it has been represented to be. It is a great time saver, is accurate and correct in every particular and is indispensable to everyone connected with the grain business, and we take pleasure in recommending its use. Yours truly,
KIRWAN BROS. GRAIN CO.

HUTCHINSON, KAN., April 26, 1897.
HENRY NOBBE, Esq., Farmersville, Ill.:
DEAR SIR:—We have received your Actuary, and after care-

ful examination of its merits we find it a very valuable work and can recommend it to all grain buyers. Yours respectfully,
W. L. WOODNUT & CO.

DECATUR, ILL., April 24, 1897.
Mr. HENRY NOBBE, Farmersville, Ill.:
DEAR SIR:—Your favor of the 23d received inclosing supplement to the Actuary, for which accept our thanks. In regard to the "Actuary" will say we are very much pleased with it and think every grain dealer should have one in his office, as it saves time and time is money. Yours truly,
DECATUR MILLING CO.

WINONA, MINN., April 24, 1897.
HENRY NOBBE, Esq., Farmersville, Ill.:
DEAR SIR:—We have used your Grainman's Actuary for some time past and find same satisfactory in every way. It is a great convenience in our office and saves labor and time. Yours truly,
WINONA & DAKOTA GRAIN CO.

NEW YORK, April 23, 1897.
Mr. HENRY NOBBE:
DEAR SIR:—We find your Grainman's Actuary of benefit in checking up invoices, inasmuch as time is saved, and accuracy insured. Yours,
CLARK & ALLEN,
Per B. D. Kennedy.

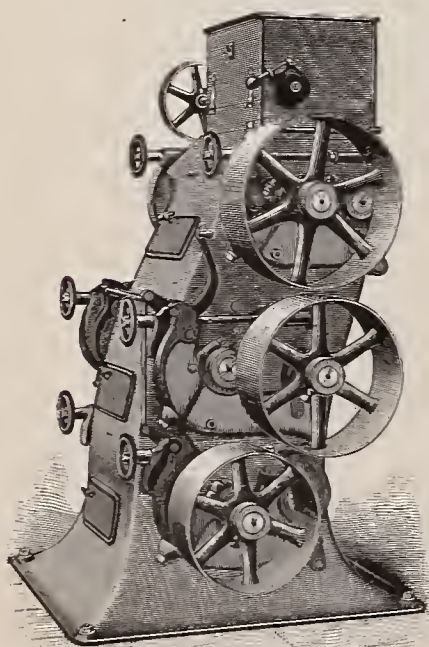
Size of book 4x7 $\frac{1}{2}$; 214 pages, fine cloth back, good paper and well bound. Copyrighted. Price reduced to \$1.00 per copy. Mailed on receipt of price. Will send you the book for inspection on request, to be returned to me if not satisfactory. Address all communications to

**HENRY NOBBE, GRAIN DEALER AND PUBLISHER,
Farmersville, Illinois.**

NORDYKE & MARMON CO., Indianapolis, Ind., FLOUR, CORN AND ELEVATOR MACHINERY.

QUALITY TO SUIT THE MOST EXACTING.

PRICES TO SUIT THE TIMES.

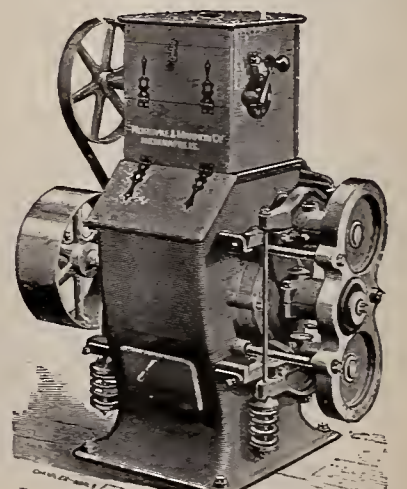


Three Pair High Six Roller Mill.

Corn Shellers,
Grain Cleaners,
Flour and Bran Packers,
Flour Feeders and Mixers,
Portable Buhr Mills,
Hominy Mills,
Wheat Heaters,
Scales,
Shafting,
Pulleys,

Elevator Supplies.

Hangers,
Boxes,
Gearing
Belting,
Steel Conveyors,
Wood Conveyors,
Link Belt,
Sprocket Wheels,
Engines and Boilers,
Water Wheels,



Three Roll Two-Break Corn and Feed Mill.

TEN SIZES and STYLES of ROLLER, CORN and FEED MILLS

No doubt about the volume of our voice if price and merit talk, and what we say will be interesting if you intend to buy.

WRITE US, SAYING WHAT YOU WANT.

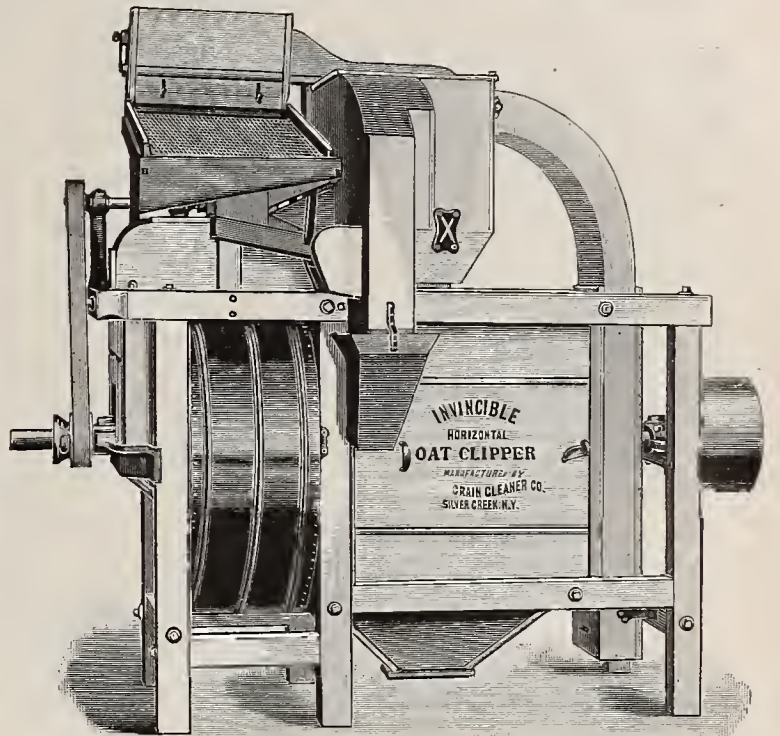
NORDYKE & MARMON CO., - INDIANAPOLIS, IND.

The Invincible Oat Clipper

It is the strongest and best constructed machine on the market. Will do more and better work with the least waste than any other. It contains many important features not found in any other clipper. It has been adopted by some of the most progressive handlers of oats and is pronounced by them superior to any other machine they have ever used.

By our PATENTED PROCESS of introducing air to the cylinder we remove instantly all loosened impurities and there is no chance for the dirt and stuff to lodge and choke.

If interested, we shall be pleased to supply you with a list of users. If you adopt the INVINCIBLE Oat Clipper you will have no trouble. WE POSITIVELY GUARANTEE IT THE BEST MADE and that you will get the best results from its use.



Invincible Grain Cleaner Co., INVINCIBLE WORKS, SILVER CREEK, N. Y.

Remember that we make Separators, the best in the market.

James L. Wheeler, Agent, Gore's Hotel, Chicago, Ill.

FOR

Corrugated Iron Roofing,
Siding, Weatherboard-
ing, etc.

WRITE

THE

Cincinnati Corrugating Co.

Box 369, PIQUA, OHIO.

BISULPHIDE OF CARBON,

Of Special Grade for Killing Insects in Warehouses, Etc.

Send for Instructions and Order Direct from
the Manufacturer,

EDWARD R. TAYLOR,

CLEVELAND, OHIO.

DONKEY PAINT
ABSOLUTELY RUST PROOF
MANUFACTURED BY
THE KANSAS CITY METAL ROOFING & CORR. CO.

416
Del. St.,
Kansas City, Mo.

CASE PRICES,
1 qt. cans, each, \$.50
1/2 gal. cans, each, .75
1 gal. cans, each, 1.15
5 gal. cans, each, 5.00
10 gal. cans, each, 9.00

Mixed ready for use. Glossy black finish. One gal. will cover 600 square feet of surface. ONE COAT WILL LAST FIVE YEARS.

Also Roofing, Steel and Iron, all Styles.

Ark Brand and Rubberoid Prepared
Roofing, Building Paper, Etc.

HIGH GRADE GOODS ARE OUR SPECIALTY.

Kansas City Roofing & Corrugating Co.,
KANSAS CITY, MO.

UP TO DATE Steam Engines

For Grain Elevators.

Simplest, Cheapest, Best.

Write for Catalogue and Prices.

RICHMOND BROS.,

Engine Builders,
ST. JOHNS, MICH.

THE KAESTNER Morgan Improved Oat Clipper.

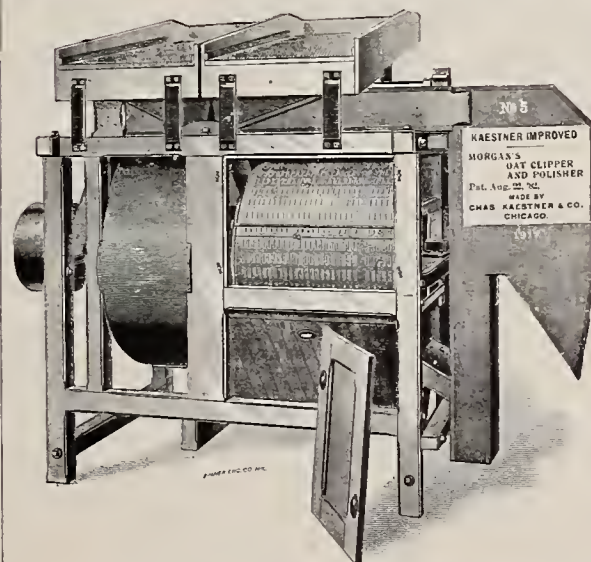
OVER 1,000 IN ACTUAL USE BY THE LARGEST CLIPPERS IN THE WORLD.

"No machine so good
as the

MORGAN"

Is what over 1,000 users
of the "Kaestner Im-
proved Morgan Oat Clip-
per" say of it.

Can you make a
mistake in buying
the "*Morgan*" after
such evidence?



WE CLAIM for this machine that it will clip more oats with less power, and do more even and better work, than any other Oat Clipper on the market.

WE CAN SUBSTANTIATE THIS CLAIM.

We also build the Kaestner-Morgan Improved for scouring Wheat, Barley and other Grains, and a special machine for handling Malt Barley. Write us what you want to do, stating desired capacity, and machines will be built to suit the work.

Chas. Kaestner & Co.,

ENGINEERS, FOUNDERS AND MACHINISTS, . . .

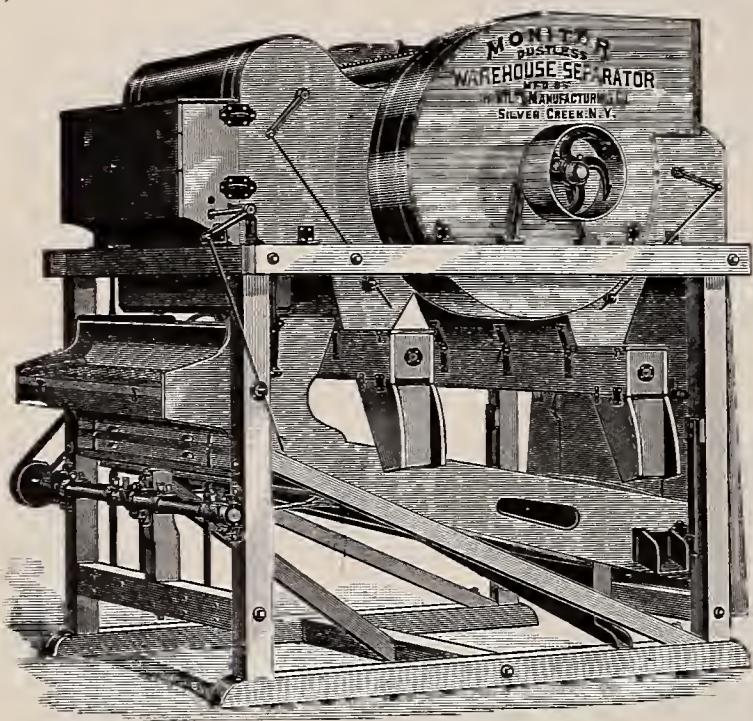
. . . MANUFACTURERS OF POWER TRANSMISSION MACHINERY,

241-269 South Jefferson St., - - CHICAGO, ILL.

STANDARD THE WORLD OVER.

Monitor Grain Cleaners, Monitor Oat Clippers.

THERE ARE MORE MONITOR MACHINES IN USE, IN THE LEADING MODERN CLEANING ELEVATORS, THAN ALL OTHER MAKES COMBINED.

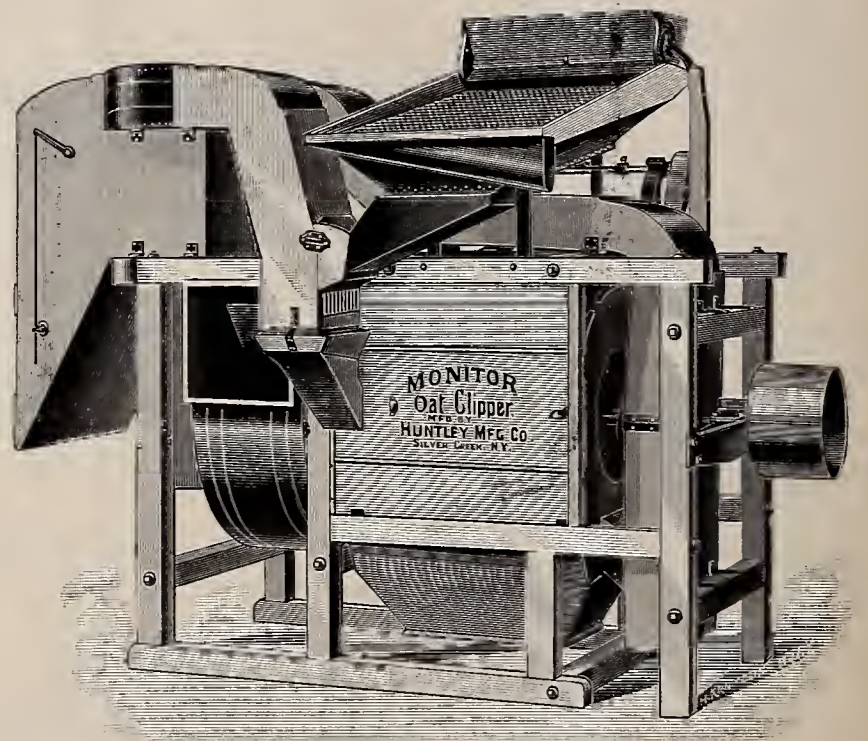


During the last six years all of the leading elevators built in the United States, with but two exceptions, adopted the "Monitor."

COMMENT IS UNNECESSARY.

THE MONITOR OAT CLIPPERS have taken their proper place—at the head.

The best constructed clipper made. More capacity and better work than any other. HIGH GRADE IN EVERY RESPECT.



HUNTLEY MFG. CO.

Silver Creek, N. Y.



A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. XVI

CHICAGO, ILLINOIS, SEPTEMBER 15, 1897.

No. 3.

{ ONE DOLLAR PER ANNUM
SINGLE COPY, TEN CENTS.

DISEASES OF GRAIN.

Blight originates in cold and frosty winds, and is often occasioned by the cold and easterly winds of spring. It generally assumes the appearance of a rusty-looking powder that soils the fingers when touched. Some blades of wheat with this species of blight were found to have these spots or patches dispersed over the surface of the leaf, exactly like that of the seeds on ferns. On closer inspection they were found to consist of thousands of small globules, collected in groups beneath the epidermis, which they raised in a sort of blister and at last burst. Some of these globules seemed as if imbedded in the longitudinal vessels of the blade. They are yellowish or rust brown and somewhat transparent, but these have been found to be patches of a minute fungus, entering either from the air or via the pores in the roots. It is known among farmers as red rust. There is another form of fungus, known as red gum, which attacks the ear only, the globules of which are filled with a red powder which explodes when they are put into water. It is generally accompanied by a maggot of yellowish color which preys upon the grain and increases the amount of the injury.

Smut is a disease incidental to cultivated corn, by which the farina of the grain, together with its proper integuments and even part of the husk, is converted into a black soot-like powder. If the injured ear can be struck with the fingers, the powder will be dispersed like a cloud of black smoke, and if a portion of the powder be wet with a drop of water and examined under the microscope, there will be found millions of minute, transparent globules, which seem to be composed of a clear and gluey fluid body. There is doubt as to the origin of smut. Some attribute it to the soil, others to the seed, holding that smutted seed will produce a smutted crop. Some farmers say that it originates in a small fungus, which multiplies and extends until it occupies the whole ear, but it seems to be merely a morbid swelling of the ear, and not at all connected with the growth of a fungus. It is said

to be prevented by steeping the grain before sowing.

Besides the disease called smut, there is also a disease similar to it, or a different stage of the disease, known to the farmers by the name of bags or smut balls, in which the nucleus of the seed only is converted into a black powder, whilst the ovary as well as the husk remains sound. The ear is not much altered in its external appearance, and the diseased grain contained in it will even bear the operation of thrashing, and consequently mingle



GREVE & IVERSEN'S ELEVATOR AT NEW HOLSTEIN, WIS.

with the bulk, but it is always readily detected by the experienced buyer, and is fatal to the character of the sample.

Mildew is a thin and whitish coating with which the leaves of vegetables are sometimes covered, occasioning their decay and death and injuring the plant. It is frequently found on the leaves and the white and yellow dead nettle; it is found also on wheat, particularly when the days are hot and the nights without dew, the richest part of a field being always the most infected by it, as it is least common in airy situations.—J. Zilma.

The first week in September more freight went east through Chicago than in any other seven days in the history of the city.

GREVE & IVERSEN'S ELEVATOR AT NEW HOLSTEIN, WIS.

Wisconsin is seldom thought of as a grain producing state, yet it produces considerable grain each year, and is among the leaders in the production of rye and buckwheat. Considerable barley is also grown. In 1896 it produced 8,899,000 bushels of wheat, 38,890,000 of corn, and 65,258,000 bushels of oats. The state has a number of well equipped country elevators, one of which is illustrated herewith. It is at New Holstein, Calumet County, on the C., M. & St. P. R. R., about 75 miles north of Milwaukee and 155 miles from Chicago. Barley is the principal grain grown in the territory tributary to New Holstein. Some wheat and rye, and a little oats are also grown.

The main building is a frame structure 24x30 feet, and contains nine bins 22 feet deep, with a capacity of 1,000 bushels each. The elevator has a metal roof. A two-story warehouse 30x34 feet adjoins the elevator, the first story being used to handle seeds, peas, flour and feed and the second for corn and oats retailed for feed. All is brought to market in bags, and the farmers empty them into the receiving hopper. A 6-horse power Regan Gasoline Engine located in the elevator, supplies the power. The gasoline tank is outside the elevator, and connected with the engine by an underground pipe.

Greve & Iversen, who own and operate this elevator, are credited by a local paper with "handling grain of all kinds, and paying the highest ruling prices. This house has become the favorite of the farmers in this vicinity. The facilities are unexcelled, and bear evidence of careful planning, no expense being spared to render the service first-class in every respect. In the management we found a gentleman thoroughly conversant with every feature and detail of the business, a good, careful buyer, sharp seller, and universally respected. The members of the firm are highly regarded in social, mercantile and financial circles for their business ability, enterprise and integrity, and no more honorable, reliable and successful house can be found."

EUROPEAN FLOATING ELEVATORS.

Europe as well as America is improving its methods of transferring grain, but the Europeans as a rule cling to the old methods with a tenacity that is pitiful. The British engineers are probably the most progressive, and they send grain handling machinery to all parts of Europe. The illustrations reproduced herewith from Engineering show two floating elevators recently constructed by S. S. Stott & Co. of Haslingden, England. The floating elevators are designed to transfer grain from barges to ocean steamships and from one barge to other barges.

From Engineering we learn that in both elevators the apparatus is on the endless chain and bucket system, the series of elevators is the same, although in the Russian elevator the grain is deposited in a boot, again raised and discharged by conveyor into a ship's hold. In the Danubian elevator the grain seems to be carried by a belt conveyor from the marine leg elevator head to the spout, and it may be spouted direct to barge or reelevated. The trestle shown usually runs on rails laid on a barge 12 feet or so wide, hence the name, a floating elevator. The boiler for supplying steam to the engine driving the elevators and conveyors is placed on deck or between decks.

The framing of the trestle consists of T and angle-irons with cross and diagonal stays, and it is carried on 18-inch wheels running on rails. The system of conveyors will at once be appreciated from the engravings; the grain is elevated from the barge which is supposed to be moored to the left of the engraving, carried along a conveyor, or discharged through a spout into a boot at the bottom of the trestle, is thence raised by another elevator discharging through a telescopic spout into the hold of the vessel. The receiving leg has an overhang of 20 feet into the barge. The receiving leg is suspended from the outer ends of a pair of derrick arms. The elevator for the apparatus to discharge 60 tons per hour has buckets 15 inches long; for the machine delivering 100 tons per hour they are 18 inches long. They are carried by double lines of detachable link chain, 9 inches to 12 inches apart. These chains are operated by sprocket wheels at either end; these rotate in gun-metal bearings secured to the sides of the elevator trunk or casing built up of timber with steel bracing and angle-irons. The tension on the chain is provided by a screw and nut fitted to the bottom bearings. For this purpose the bearings on either side are fitted into sliding frames 12 inches long, and through each there is a square-threaded screw for the purpose of making the chain taut. At the top of the screw there is bevel gear to connect the screws on either side, so that both will act simultaneously. Inside the trunk the chain guides are of timber faced with steel, which can easily be renewed. At the bottom there is a 2-inch steel grid to prevent the buckets being damaged.

The grain is delivered from this elevator through a small hopper into the conveyor leading to the boot in the bottom of the trestle. To insure readier delivery, there is a guide or backing pulley just under the point where the elevator tips its load. The conveyor is 20 feet long; this determines the amount of overhang of the elevator so far as the barge is concerned. The band conveyor is supported on two wrought-iron derrick arms of channel sections, with trunnions on each end, so as to swivel at both ends. These are supported at the outer end by steel wire ropes passing over pulleys at the head of the trestle to a power-driven crab on the platform on the trestle. The trunnions enable the derrick arms and the barge elevator to be drawn up in a vertical position alongside the trestle when not in use. The inclination at which the conveyor between the derrick arms will work varies from 15 degrees in an upward direction to 30 degrees downward. The band conveyor consists of an endless band of cotton 21 inches wide, passing round pulleys at each end, and supported by intermediate steel rollers of about 5 feet pitch. Angle-steel rollers are attached to the sides of the conveyor for giving the necessary curvature to the belt. The framing supporting the pulleys is of timber. When desirable,

the grain is protected from the weather by means of tarpaulins carried on T-irons, which are shown in the engraving.

The grain flows from the conveyor into a shoot built up of timber lined with steel, thence into the boot of the fixed vertical elevator carried upon the trestle. This elevator does not differ materially from the one which is suspended on the derricks for use in the hold of the barges. In the case of the 100-ton apparatus, it is able to discharge to a height of 25 feet above water level, and even then



FLOATING ELEVATOR FOR RUSSIA.

the conveyor into the ship's hold might be placed at a slight upward angle, although obviously this would only be resorted to under exceptional circumstances. It is very unusual to find a ship with her fixed bulwark more than 25 feet above water level. The telescopic shoot, or conveyor, into the hold of the ship, as the case may be, is also arranged to swivel fore and aft; but this necessitates in the case of a belt conveyor somewhat elaborate gear. This swivel gear is fixed to the side of the trestle, and consists of a cast-iron frame with bevel and spur gearing. The sprocket wheel for driving the belt first actuates a horizontal shaft, which, through bevel gearing and a vertical shaft, finally rotates a second horizontal shaft. This latter by spur gearing actuates the end shaft carrying the traveling drum around which the belt travels. Thus the two horizontal shafts need not be parallel, the vertical shaft transmitting motion from the first horizontal shaft to the conveyor. This con-



FLOATING ELEVATOR ON THE RIVER DANUBE.

veyor is usually about 25 feet long in both 60 and 100 ton apparatus. Sometimes there is substituted a telescopic shoot constructed of steel plates, and about 30 feet long, opening out in 10-foot lengths. This, of course, can only be used when the vessel is lower than the top of the trestle of the conveyor.

Two 60-ton machines are not infrequently mounted upon one barge, in which case the power plant consists of a horizontal multitubular boiler, 7 feet 6 inches in diameter by 7 feet long, furnishing steam to two small horizontal steam engines, each with two cylinders, 7-inch bore by 12-inch stroke, the actual power required for both machines not being more than 20 indicated horse. The 100-ton machine is driven by a horizontal steam engine

with two cylinders 9-inch bore by 15-inch stroke, steam being supplied by a horizontal multitubular boiler, 7 feet in diameter by 7 feet 6 inches long. The actual power required for driving a 100-ton machine is not more than 15 indicated horse. The engine drives a shaft with bearings on the deck of the barge, and extending the whole length of the railway on which the trestle is traversed. Power is transmitted from this shaft by wheels and detachable chain to a second shaft, fixed as shown on the traveling trestle. Similar chain gearing drives the shaft on the derrick arms, whence power is derived for the swiveling of the derricks, for driving the conveyor and the bucket chains of the elevator, as well as of the fixed elevator. Detachable chains are used in all cases, and where there are vertical drives tension wheels are introduced. For driving the fixed elevator power is taken from the same shaft to a shaft at the top of the trestle, which also drives the conveyor, extending over to the hatch of the ship. The sprocket wheels are all of steel. Inside the elevators the chain is of 2½-inch pitch in the case of the 60-ton apparatus, and 3-inch pitch in the 100-ton plant. The drive chain is 3-inch pitch, but the main drive from the engine shaft is 3½-inch pitch. The chains in the 60-ton elevator are constructed for a working strain of 850 pounds, and in the 100-ton machine 1,500 pounds.

On a platform of the trestle is a crab driven by two belts from the main shaft, so fitted as to give reversing motion, with one fast and two loose pulleys. All the wheels are of steel, the bearings of gun-metal; sprocket gear is preferred, as it is unaffected by weather. All timber subject to the wearing action of the grain is steel-lined. The trestle wheels are driven by spur and pinion gear; the gauge is usually 10 feet, and there are four wheels. The barges themselves are from 60 feet to 100 feet long, from 15 feet to 20 feet wide, and about 10 feet deep.

The special feature of the Russian elevator is that the apparatus is bolted to the deck, and that the grain is conveyed from one barge to another or on shore; and thus instead of the band conveyor from the receiving leg, there is a steel telescopic spout delivering into a hopper under which there passes a band conveyor which is led to the barge or on shore. The distance the grain may thus be conveyed is not limited, as several belt conveyors can be laid one under the end of the other. The order carried out in this case was for conveyors to traverse 95 feet from the foot of the elevator.

CHANGE OF INSPECTION AT TOLEDO.

The Toledo Daily Market Report of September 2 contained the following notice:

Wheat with 25 per cent. of rye and 60 pounds weight will be graded wheat and rye.

With more than 25 per cent., and not over 50 per cent. of rye and 60 pounds weight, rye, N. E. G. wheat mixed.

With more than 50 per cent. rye and 56 pounds weight, rye and wheat.

The Orange Judd Farmer is already getting hysterical over the large acreage which will be devoted to wheat next season. It says: We wish to renew our caution of two weeks ago relative to the probably large acreage of fall-sown wheat and rye at the north, and winter oats at the south. The advance in the prices tends to stimulate the seeding of a larger area than ever. Reports from the southern hemisphere indicate that the same plan has been followed there. We fear that a continuance of good prices until March will lead to an enormously increased area of spring-sown grain. Should the season be favorable, the yield per acre would not only be large, but the increased acreage might make the crop unwieldy. Of course, if the season should be unfavorable at home and abroad, all would be well, but experience heretofore indicates that it is comparatively seldom that any part of the world has serious crop failures two years in succession.

A KANSAS CORN PILE.

During recent years the acreage devoted to corn in Kansas has been materially increased, until the Sunflower State is one of the principal corn-growing states. During the seven last years it has produced 976,736,000 bushels of corn. Its crop in 1890 was 55,269,000; in 1891, 141,893,000; in 1892, 145,825,000; in 1893, 139,457,000; in 1894, 41,798,000; in 1895, 294,760,000, and 247,734,000 in 1896. Its crops of 1895 and 1896 entitled it to fourth place among the corn growing states, and the prospects are that it will do as well, if not better, this year. The states which led it in corn production in 1896 were Iowa, with 321,719,000 bushels; Nebraska, 298,600,000 bushels, and Illinois, 284,573,000 bushels.

Some counties have been especially favored with large crops, and Smith County, in the north central part of the state, seems to have been one of them. The Gaylord Herald, of Gaylord, which is one of the principal markets of the county, recently published the view given herewith, which shows the corn shellers at work on a pile containing 50,000 bushels of corn. It says: "More corn was raised in Smith County in 1896 than in any previous year. There have been years when corn yielded more bushels to the acre, but in those years the acreage was much smaller, and consequently the total fell below that of last year. In former years the

tically out of danger. The crop of 1897 will be a record-breaker."

THE SORGHUMS IN KANSAS.

In 1893, when the first returns of the non-saccharine sorghums in Kansas were made to the State Board of Agriculture, the area planted to milo maize was 14,004 acres, Kafir corn 46,911 acres, and Jerusalem corn 17,027 acres. In the four years since, according to a press bulletin issued by Secretary F. D. Coburn, milo maize has fallen 25.5 per cent. in acreage, and Jerusalem corn 50 per cent., while the increase in Kafir corn has been 692 per cent., or 324,838 acres. The counties in 1893 having 1,000 acres or more of Kafir corn were Neosho, leading with 2,832 acres; Clark, 2,480; Comanche, 2,405; Haskell, 2,005; Ness, 1,716; Greenwood, 1,627; Dickinson, 1,549; Stanton, 1,321; Gray, 1,263; Morris, 1,218; Meade, 1,210; Ford, 1,171; Grant, 1,150; Lincoln, 1,099 and Ellis, 1,044, or fifteen counties all told. This year there are 71 counties with 1,000 acres and upward ranging from 1,128 acres in Graham to 22,256 in Greenwood. This year's area is 371,838 acres. The leading counties are Greenwood, with 22,256 acres; Barber, 21,548; Dickinson, 11,731; Butler, 11,714, and Reno, 11,124. So popular has this plant become that it is grown in every county, and, except in a very few,

SHRINKAGE OF GRAIN.

Joseph Allen of Gano, Ohio, in a recent communication writes: For the past ten years I have been making test experiments to learn the facts as to the exact amount of shrinkage in weight, if any, of the different kinds of grain and other farm products, from the time of thrashing and also gathering of the corn crop up to the first Monday in April, the day that all farm products on hand in Ohio are subject to be placed on the tax duplicate, with the following results:

I thrashed my wheat crop of 1893, July 28. It was in good condition, and I filled three sacks with wheat. Their aggregate weight was 405 pounds. A card was sewed on the sack, stating date of weighing and weight. They were placed in the wheat bin, where nothing could disturb them, and I reweighed them March 24, 1894, making about eight months, and they had not lost a single pound, but gave stronger weight than when first weighed.

On the first day of August, 1894, I filled ten burlap sacks of oats, as they came from the thrashing machine. The ten sacks were weighed separately, and also in bulk. The ten sacks weighed 1,272 pounds. The weight of each sack was written on a card, and sewed on the sacks, so that there could be no mistake. They were reweighed Jan. 1, 1895, and the ten sacks weighed 1,316 pounds, a gain in weight in



GREENLEAF & BAKER'S CORN PILE AT GAYLORD, KANS.

south half of the county was devoted largely to wheat, the Solomon Valley being almost a continuous wheat field, leaving the north half to maintain the county's standing as a corn producer. Chinch bugs multiplied and finally not only devoured the wheat, but well nigh ruined the corn. Of late years the wheat acreage has fallen off, and the corn acreage increased, so that last year the whole county was in corn. In 1895 the total yield was 2,008,780 bushels, the average being 10 bushels per acre, and in 1896 the total yield was 6,000,000 bushels.

"The prospect is good for a much larger crop than that of last year, so that Governor Riddle's vision of corn cribs eighty feet high in Smith County may prove to be a prophecy. Last fall, when the buyers began to receive corn, the rush exceeded expectations, and it was impossible to build cribs fast enough to receive it. One of the principal buyers at Gaylord is the firm of Greenleaf & Baker of Atchison, and though they have several large cribs and built others as fast as the work could be done, the overflow was so great that they soon had 50,000 bushels piled on the open prairie, as shown in the engraving. Later in the season this pile of corn was shelled out and shipped, a large proportion of it going to Mexico. There is still cribbed on the town site of Gaylord in the neighborhood of 200,000 bushels of last year's crop, and this is only a small portion of the crop yet held in the county. As stated above, the prospect is good for a much larger crop than that of last year. The season has been one of the most favorable ever known in the county. At no time in the season has the growth of the corn been retarded by drouth or unfavorable conditions, and it is now so far advanced as to be prac-

its acreage is of considerable importance. If the total increase in acreage during the past four years was equally apportioned there would be 3,093 acres increase for each county in the state.

During the four years from 1894 to 1897 inclusive, the saccharine sorghum area increased 220,323 acres, or 166 per cent. The total this year is 352,528 acres. The county having the largest planting is Barber, with 13,183 acres, followed by Finney, 11,873; Ottawa, 9,930; Reno, 9,082; Russell, 8,883, and Dickinson, 8,269. Sorghum is grown in every county; the great bulk of the saccharine sorghum now raised in the state is for forage and grain; not at all for sugar-making, and only in a small way for syrup. While stock-growers are pretty evenly divided as to which sorts are of greatest value for their purposes, both the sweet and the non-sweet are rapidly gaining in popularity and becoming important factors in their business.

Miss Eleanor Omerod—who, with Mr. W. B. Tegetmeier, has just published a brochure exposing that feathered thief, the sparrow—is better entitled to be called the "farmer's friend" than any politician who has posed in the character. For more than twenty years she has devoted her remarkable knowledge of botany, entomology and agricultural chemistry to the service of the farming interests, and the annual report of Observations of Injurious Insects and Common Farm Pests, with methods of Prevention and Remedy, are not only records of painstaking investigation and research, but have been of the greatest practical value to the agriculturist. It has been a labor of love entirely, for she has done it at her own expense.

the five months of 44 pounds, or 3½ per cent. This was a surprise to me, but the season of 1894, during their latter growth and filling, was remarkably dry. There had been no rain from June 26 up to September 10, except a few local showers. Perhaps, in years of abundance of rain during their ripening and up to thrashing, they would not make such a gain in weight.

It is a well-known fact that clover seed, when thrashed in good condition for storage, and weighed, and then reweighed in twelve months, gains 1 per cent. in weight. The same is true of flaxseed, and rye and barley lose nothing by shrinkage in weight, but all these grains may lose by wastage.

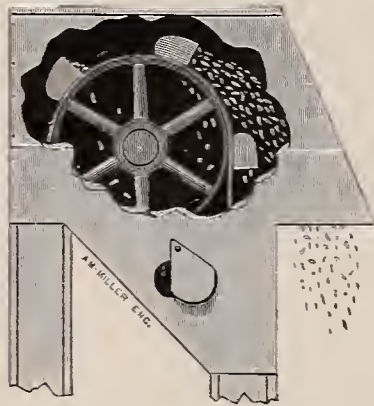
The fall of 1895, I filled a large burlap sack of ear corn, the day it was gathered out of the field (October 25), and it weighed 153½ pounds. A card was sewed on the sack, stating date and weight, and on Monday, March 9, it was reweighed, and it had not lost a single pound, and on July 1 was reweighed again and weighed 150 pounds, showing a loss in shrinkage in weight of three and a half pounds in a little over eight months; but the fall of 1895 was a remarkably dry fall and corn, especially the small cob varieties and early-planted, was fully matured by October 25. Large-eared corn with large cob, especially in wet falls, will shrink both in bulk and weight from 5 to 6 per cent. Such has been my experience by repeated test trials. When corn loses over 6 per cent. there must be some wastage.

The Philadelphia Record wants the American Exhibit at the Paris Exposition to show up our grain elevators, the commerce of the great lakes, etc., as "an object lesson."

PROPER CONSTRUCTION OF ELEVATOR HEADS.

The report on the fire in an Ohio elevator and the cause, published on page 54 of the "American Elevator and Grain Trade" for August, has attracted considerable attention from elevator men, and those who are anxious to reduce the fire hazard of their elevators have been wondering how they can construct their elevator heads so as to minimize the hazard.

We illustrate herewith two elevator heads with strut-boards slanting toward the down leg, which



ELEVATOR HEAD PROPERLY CONSTRUCTED.

is the proper way to construct them. If any elevator man has an elevator head with a hopper under the pulley like the one illustrated last month, he should replace it with one similar to the ones shown here. Then his elevator will be in much less danger of destruction by fire, and he can rest easier.

W. L. Barnum, Secretary of the Millers' National Insurance Co., says: "The elevator head is undoubtedly largely responsible for many fires, and especially for those mysterious ones which are discovered after the elevators are shut down. The head, as usually constructed, is a regular fire nest. Frequently the pulley is found grinding on the strut-board, and, from friction or otherwise, the accumulation of dust under the pulley is ignited. The fire thus started will smolder unobserved until it eats its way to the air; then it is quickly developed into flames, usually too late to be arrested."

The slanting strut-board should be placed at such a distance from the pulley that the two can never come in contact. It should be given a pitch of 45° toward the down leg, and the back board of the down leg cut away from the lower part of the strut-board to the pulley, so that there will be no chance for the dust to accumulate where fire may lodge and live any time in concealment. If a hand hole is provided as shown the operator can readily clean out the head, should it become filled with dirt or grain. Remodel your heads to this plan of construction before it is too late.

DATES OF THE WHEAT HARVESTS.

Harvesting of wheat is going on, says Farm Implement News, nearly all the year around. In the United States the harvest begins in May in Texas, and is continuous northward, ending in Canada in September. In parts of northern Europe, for instance, in the north of Scotland, some wheat is cut as late as October. In South America the wheat harvest begins in October with the little that is raised nearest the equator, and continues southward, receding from the equator through November, December, January and into February in Patagonia. The largest amounts of South American wheat are raised in the Plate River countries, mainly in Argentina, which occupies the same degrees of latitude in the southern hemisphere as this country does in the northern, and there the harvest begins in December and runs through January. In the Australian colonies wheat harvest begins in December and runs through January. Some wheat is cut in India in February, as also in parts of Africa north of the equator, and harvest continues in these countries through March, April and May, ending in India in April and in North Africa in May.

As a rule, the sun being six months north of the

equator, then six months south of it, the harvests in same latitude on either side will be six months apart; but this rule is varied by location with reference to the sea, the gulf stream and also by altitude. Most of the wheat of the world is cut in June, July and August.

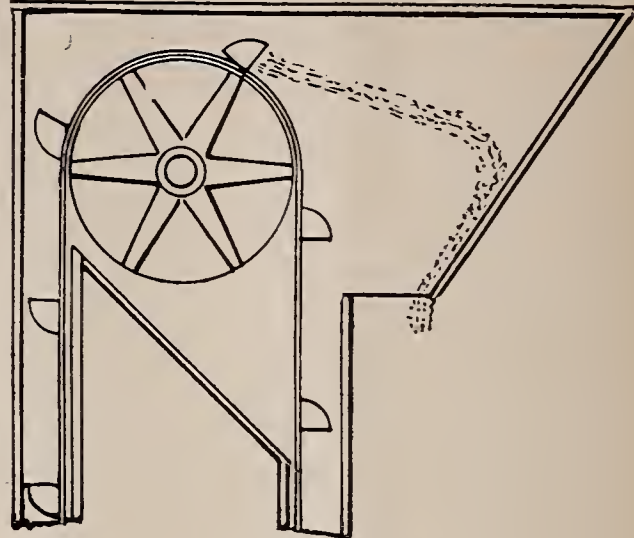
THE LOCUST IN THE ARGENTINE.

The arrival of Professor Brunner, the North American specialist, who has been brought here at considerable expense to study the habits of the locust, and offer suggestions as to the best way of dealing with the plague, has apparently given rise to hopes which may be doomed to disappointment. It may also have given room for criticisms which are not altogether warranted. At the same time, it is perfectly fair that Mr. Pennington, in his brochure on "The Argentine Locust, Its Life, Development and Migration," should point out that the question is one to which many scientific men in this country have already devoted a good deal of painstaking study; and it would be well for the more sanguine to bear in mind the distinctly negative results which science has given up till now.

It is assumed, on what may turn out to be altogether insufficient evidence, that the locust has a "permanent breeding ground" in a somewhat confined area, to which special attention may be directed, with the object of extirpating it altogether. Against this assumption we have the fact that this particular variety of locust differs in its habits from the North American locust, which has been ascertained beyond all doubt to propagate from a confined area. The locust which we are unfortunately entitled to call the Argentine locust, in view of the ravages which it commits in this country more than in other parts of South America, is by no means confined to a limited part of the continent, but may be found in all the countries of South America. It has not been found so far to propagate and maintain itself for long periods permanently in this country; but experiments have

A STEEL CLAD ELEVATOR.

The accompanying illustration shows an elevator covered with the Garry Roofing and Corrugated Siding, making a steel covering over all, and being absolutely fireproof. This style of covering can be easily repaired and laid by anyone. For grain elevators the corrugations are made crosswise of the sheet, so when applied they will run up and down the building, preventing its buckling and giving



PROPER CONSTRUCTION OF ELEVATOR HEAD.

more or less elasticity to the building, lapping the sheet on the one below about 1 inch, and nailing the upper sheet about 1 inch above the lap, this allows for movement of the iron as the building settles. The regular size of sheets for elevator siding are 42 inches long and 28½ inches wide. Corrugated sheets for roofing and siding, ¾ of an inch to 3-inch corrugations, regular stock lengths of sheets, are 6 to 10 feet, but are cut to any special length required.

For the past 26 years The Garry Iron & Steel Roofing Co. of Cleveland, Ohio, has been manufacturing iron and steel roofing, siding and ceiling.



A STEEL CLAD ELEVATOR.

proved that it can and does survive and breed during more than one season, even in the temperate parts of the republic. Then, again, the fact that with each season its invasions come earlier in the year, suggests the conclusion that it is becoming acclimatized, and that in no long time we shall have no need to go far in search of its "permanent breeding ground."—Review of the River Plate.

The night of August 31 saw at Galesburg Ill., what will probably rank as the movement record. Thirty-seven trains, embracing 1,220 loaded cars, were despatched from that point during the night, all of which reached Chicago without accident or delay. To the uninitiated this statement will convey little information, but by those acquainted with railroad operation the magnitude of the work will be appreciated.—Railway Review.

Its experience with iron roofing and corrugated siding in the construction of grain elevators commends it to parties who contemplate building structures of this kind. Taking into consideration the quality, the cost of material is far less than that of slate. Being lighter, it does not necessitate building as heavy a frame. Slate also often breaks from frost, and is frequently blown off the building, thus making it very costly to repair. The manufacturers will be pleased to correspond with interested parties.

The Grain Dealers' National Association should be kept at work. If the income is not sufficient to carry on the extensive work it started out to do, the work should be reduced to fit the income. The failure of one scheme to advance the interests of members does not warrant the abandonment of all effort to promote trade interests by organization.

GRAIN TRADE TERMS.

The Winnipeg Grain Exchange has adopted rules governing the interpretation of trade terms which conform to the accepted meaning in some other markets. The terms are common in most markets, but the accepted meaning varies. The rules of the Winnipeg Exchange are as follows:

8. When a sale or contract is made designated by the initials "C. I. F.," it signifies that a sale is made at a price covering cost of articles sold, together with the expense of insurance and freight covering the property to the point of destination agreed upon by the contracting parties. The seller's portion of such a contract is completed when he shall have furnished evidence of loading the property; such evidence being a bill of lading, and also evidence of a contract for carriage from point of shipment to point of destination, accompanied by an insurance certificate issued by a company in good standing, insurance paid. From the time of furnishing these evidences of the seller's obligation, the total responsibility of the property rests absolutely with the purchaser, and the seller therefore is in every particular excepted, in fact and in terms, from liability of whatsoever name and nature, under such contract.

9. F. O. C.—These initials mean "free of charge." The charges indicated being:

(A) The back charges on the property, such as railroad freight, shunting and elevating.

(B) The current term of storage, the latter being according to the regulations of the elevator or warehouse in which the property is placed, except in case of any special arrangement made by the seller with the proprietors of such warehouse or elevator, when the buyer is to have the benefit of such arrangement, unless specially provided for otherwise. The property to be at buyer's risk of fire on delivery. The seller to give the buyer not less than five days free of storage from date of delivery.

All sales made without specific conditions will be considered as strictly free of charge (F. O. C.). The seller to be under no obligation to furnish conveyance.

10. F. O. B. is to be interpreted as free on board sailing or steam vessel or barge, such conveyance, unless specially agreed on, to be provided by the buyer. When being shipped into vessel to be at buyer's risk; and, if not insured by him, the seller to be at liberty to insure the cargo, and to charge the same to the buyer.

11. F. O. B. CARS—Cooperation of flour under this term being always the duty and at the expense of the seller, the same to butter and other cask goods. "F. O. B.," simply, not to apply to sales in which the shipment is made by railroad cars, when the term will be distinctly "F. O. B. Cars," and in this case the seller has to provide the cars and receive payment on presentation of proper documents.

12. The term "in store" to mean that grain is free of all charges to the buyer. The seller to give the buyer not less than five clear days free of storage from date of delivery of documents.

13. ON TRACK—This term to mean the delivery of the property in the cars of the railroad, in the yard, or on the track where such cars are ordinarily placed after arrival in the city, or at any station on the line of road where the sale may be made. The property to be free of charge in its then position, and delivery to be made by the railroad advice note, with bill of lading properly indorsed to buyer, with freight and shunting charges duly receipted thereon. In case such advice note be not receipted, the freight and charges to be deducted from the invoice, unless satisfactory evidence is afforded the buyer that such charges are paid. Property to be at buyer's risk after delivery of order.

14. PROMPT SHIPMENT—Prompt shipment shall be considered any time within 15 days, inclusive.

15. IMMEDIATE SHIPMENT—Immediate shipment shall be considered any time within 5 days, inclusive.

16. IMMEDIATE DELIVERY—Immediate delivery shall mean delivery on the same business day that sale is made.

17. FUTURE DELIVERY—All sales for future

delivery shall be made at seller's option, unless otherwise stated.

18. CARS—All sales to be for cash, and payment to be made on presentation of proper documents. Payment in all cases to be made within not less than 30 minutes before the closing hour of the bank on the day of presentation, unless by special agreement.

19. DELIVERY—Delivery will be considered complete on presentation of proper documents on any business day before 1 o'clock p. m., except Saturday, when delivery shall be made before 12 o'clock noon, unless otherwise specified at the time of sale.

20. CARLOADS—When carloads of grain, meal feed and other produce are purchased without any specified agreement as to quantity to be loaded in each, it will be understood that a carload shall mean not less than the minimum capacity of the car. When on a contract for a specified quantity of grain, delivery is made by presentation of carload documents, a margin of 5 per cent. of the quantity shall be allowed.

NEW GRAIN ELEVATOR IN ASIA MINOR.

Asia Minor has not made a great reputation as a grain exporter, yet there are optimists among its champions who think it will eventually be an impor-



NEW GRAIN ELEVATOR AT DERINJA, ASIA MINOR.

tant factor in the world's grain markets. In a communication to the Miller, George Baker & Son of Constantinople write that "the extension of this railway from Ismidt to Eskicheir, and thence on to Angora, with a branch from Eskicheir south to Koniah (only completed in 1895), has been the means of bringing under cultivation large tracts of country capable of producing malting barleys equal to some of the better European kinds, as well as of largely increasing the output of wheat, rye, maize, beans and linseed.

"To the Turkish cultivator far from either a seaport town or a railway terminus, a bountiful harvest often meant ruin, because the tithe had to be paid in cash. The poor farmer who could not dispose of "his plenty" to pay the tax-gatherer (who refused to accept in kind) often had his cattle or household goods sold to meet the tax. But this state of things has altogether been changed in the above districts and the cultivator no longer dreads a bumper harvest, because he can now easily sell all he grows, and is consequently encouraged to increase the area of his cultivation.

"The railway company has also distributed new seed to the farmers by way of a loan, and should they also introduce thrashing machinery, and keep the cereals free from stones, we have no hesitation in saying that the wheats of these districts will readily find favor with English millers.

"The photograph we forward represents the silos just erected at Derinja on the Gulf of Ismidt. The company found that at Constantinople, or, properly speaking, at Haidar Pacha, the southerly gales which are here prevalent in the spring and autumn stopped the loading of the barges at Haidar Pacha, and so interfered with the working of their heavy

carrying trade that to facilitate the shipping business they had to make Derinja the seaport terminus of their line. Here steamers will have every facility for loading. There is 40 feet of water, so that the largest steamer can run alongside the silos. The silos are equipped with weighing machines, with grading and cleaning machinery, and are lighted by electricity, so that there is no difficulty about night work. As a proof of the increase of revenue derived from the 1896 crop, Sir Vincent Caillard, in his report to the bondholders, says that: 'Notwithstanding the political troubles in Asia Minor, the revenue is largely in excess of that of 1895.' The crops everywhere in these districts are very fine, and we anticipate (should nothing unforeseen occur) a harvest from twice to three times that of 1896, nor should we be surprised to find Turkey's export of barley for 1897-98 a record one."

DOTS AND DASHES

The Ontario oats crop foots up \$6,971,000 bushels, the largest on record.

North Dakota claims to have \$60,000,000 worth of agricultural produce to sell as the result of the crop of 1897.

Great Bend, Kans., shipped \$59 cars of wheat during August, a surprising record, as it was all shipped practically over one road.

Since the building of the 250,000-bushel elevator at Mobile, Ala., quite a trade in grain has sprung up between that port and Mexico.

Up at Eckleson, N. Dak., an elevator was moved two miles by loading it on flat cars. The building was 30x60 feet, and weighed 125 tons.

Portland, Oregon, received 500 cars of wheat in the last two days of August and the first of September, an unprecedented amount for that city.

The wheat situation remains unchanged. The fluctuations in price are caused merely to show the men who know it all that they are mistaken.—Chicago Tribune.

A wheat peddler in Oakland, Cal., has been cheating people by having a "loaded" trier by which the sample taken from his bags of screenings and trash showed up as good wheat.

One of the numerous indications of the turn in the tide of depression is the ordering of 500 new cars by the Missouri Pacific, which has more business than it can handle with its present facilities.

The police have been making life miserable for some of the New York bucket shops; and yet when one of them failed the other day, it also required the aid of the police to keep the patrons from mobbing the manager.

Idaho papers are kicking on a statement which has been going the rounds of the press giving the wheat yield of the different states, and crediting Idaho with only 1,700,000 bushels. The papers claim that the wheat crop of the state foots up nearly 10,000,000 bushels.

Indiana elevator men are somewhat slow in declaring in favor of the organization of an association. Most of them are heartily in favor of organization, and, no doubt, have slighted this matter from carelessness rather than intent. More should declare for organization before a meeting is called.

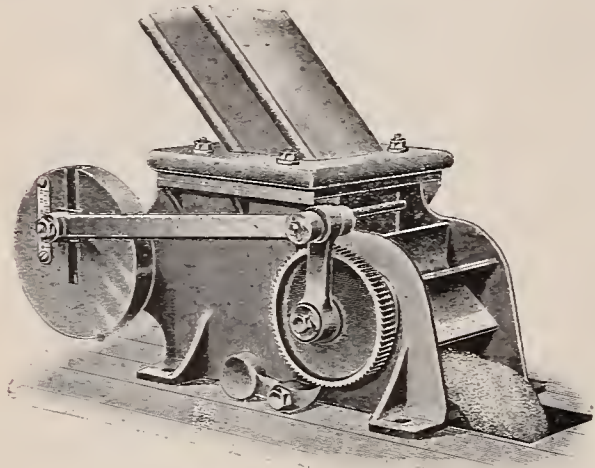
The perversity of human nature was strikingly shown in the recent advance of corn. All through Central Illinois, grain men had farmers' corn on hand with instructions to sell when it reached 25 cents. When corn touched that figure the farmers quite generally countermanded the instructions. Corn dropped a little, and the instructions to sell at 25 cents came back.

The assessor in St. Joseph, Mo., is in a quandary over the elevator of Harroun Bros. The elevator is on land leased from the Chicago Great Western Railway. The railroad disclaims ownership, and Harroun Bros. offer to pay all the costs if someone will only prove that they own the elevator. They say they will be glad to pay the taxes if their ownership can be established.

MOIR'S WHEAT MIXER.

Although the owners of grain hospitals, or grain cleaning and mixing houses in this country do a considerable amount of mixing of grain, yet they seldom use machinery designed for this special purpose. Our illustration shows a British grain mixer built especially for mixing different grades of grain. It is the invention of Adam Moir, manager of the Union Mill at Wolverhampton, England.

The manufacturers claim that no simpler or more perfect arrangement for regulating the delivery of grain has ever been invented. The machine consists of a cast iron frame inclosing a series of iron



MOIR'S WHEAT MIXER.

wings. These wings are made to revolve by a ratchet wheel connected to a revolving disk. The crank pin is adjustable, and the throw of the crank can be regulated easily and quickly by changing its position on the index plate of the disk. This method of regulating the speed and increasing or decreasing the capacity of the machine is entirely new, and by this adjustment of the ratchet wheels the proportions of grain from the various bins can be gauged to a nicety.

The machine is simple in operation, and it is claimed that it is impossible to block the passage of the grain by any obstruction.

The grain to be mixed is spouted into the hopper at the back of the wings. As it comes in contact with the wings it is mixed and delivered to the belt or conveyor. The bottom of the hopper in the mixer is made of sheet steel, and is so constructed as to slope toward the revolving wings, thus facilitating the delivery of the grain. Being entirely open, the parts of the mixer are accessible, and the greatest accuracy in the regular delivery of grain in any quantities is claimed for it.

NEW WHEAT GRADES OF KANSAS INSPECTION DEPARTMENT.

Chief Grain Inspector W. W. Culver of the Kansas Grain Inspection Department has changed the rules governing the grading of Kansas Hard Winter Wheat so as to provide a No. 1, and to admit wheat weighing one pound less than heretofore to No. 2 and No. 3. The rule changed provides:

No. 1—Shall be pure hard winter wheat, sound, plump and well cleaned, and shall weigh not less than 60 pounds to the bushel.

No. 2—Shall be sound, dry and reasonably clean, hard winter wheat, and shall weigh not less than 58 pounds to the bushel.

No. 3—Shall include hard winter wheat, sound and some bleached, but not clean or plump enough for No. 2, and shall weigh not less than 55 pounds to the bushel.

No. 4—Shall include hard winter wheat, tough, or from any cause so badly damaged as to render it unfit for No. 3 hard.

Rejected.—All very damp, very musty or smutty, trashy or dirty winter wheat.

The Missouri rules governing the grading of hard winter wheat require one pound more to the bushel for Nos. 1, 2 and 3. The purpose of making the change is to induce Kansas shippers to have their wheat inspected by the Kansas department instead of by the Missouri department. The effect of the

change will be to reduce the market value of all wheat, and especially the wheat which weighs more than the amount required for one grade, but not enough to admit it to the grade above.

No. 1 Kansas Hard is a new grade, and if the inspector had stopped with its establishment no complaint would have been entered.

Reducing the weight required of 2 and 3 is what is objected to by the trade. Wheat weighing 59½ pounds must be graded No. 2. Changing the grade of a wheat often changes its market value, although it has no effect on its real value.

Country shippers who propose to sell by Kansas grades will mix their wheats before shipping. If they have much that is above the test weight required, but not heavy enough for a higher grade, they will reduce its weight by adding lighter wheat. If the shippers do not do this they can rest assured that the mixers at Kansas terminals will buy the wheat and mix it down to skin grade grain.

WHEAT RUST.

[From a paper on Improvements in Wheat Culture, by Mark Alfred Carleton, Asst. Div. of Veg. Phys. and Path. U. S. Dept. Agr., in the Year Book of the Dept. of Agr.]

It must be admitted that as yet there is no preventive or remedy for wheat rust, at least as far as combating the rust directly is concerned. For some time strong efforts have been made in several different countries (including the field experiments by this department for two years) to discover and establish rust-resistant varieties, but so far only partially successful and rather conflicting results have been obtained. It has been found that certain varieties are highly resistant to the orange-leaf rust, and that some of these varieties are fortunately the best bread wheats, being hardy and having hard grains with good milling qualities. They are, however, not generally good yielders. Even among the varieties of the bread-wheat group a few are found to be somewhat rust resistant, but otherwise do not possess good qualities, and again quite a number are hardy and productive, but are not rust resistant. Varieties that are quite rust resistant in Australia sometimes become badly rusted here, and this is true even to a greater extent of American sorts in Australia. There are differences in resistance of the same variety in



Healthy Grains of Jones Winter Fife Wheat. From Yearbook of Dep. of Agr. by Carleton, Div. Veg. Phy. and Path. U. S. Dep. Agr.

different localities in the same country. Such variation is most likely due to changes in the constitution of the plant caused by changes of climate. Our hard American-grown fives are known to become much softer when grown in Australia.

On account of the great variation and consequent uncertainty in the rust resistance of varieties, it seems that the production of early varieties, that will ripen soon enough to escape the rust, is nearly, if not quite, the most important feature in sowing wheat. Our Early May (though a rather soft sort), the Roseworthy and Allora Spring of Australia, and a few Japanese sorts are worthy of notice in this respect. In the states of the plains the early varieties have the additional advantage of being more likely to escape shriveling of the grain by drouth. Besides this, even the most rust-resistant varieties are occasionally much injured during the seasons when the rust is un-

usually bad or the wheat unusually late in ripening.

The writer is confident, however, that after all, the orange-leaf rust does very little, if any, damage to the grain in this country, although perhaps it injures the straw considerably; and that all experiments, including the writer's, heretofore made by botanists in this country with a view to prevention or remedies, have been entirely with the wrong species of rust. From personal observation and inquiries extending over four years, the writer believes the inevitable conclusion is that in all cases of really serious damage to the grain by rust the black-stem rust (*Puccinia graminis*) is the real cause, although the other species may also be pres-



Shriveled Grains of Jones Winter Fife Wheat. From Yearbook of Dep. of Agr. by Carleton, Div. Veg. Phy. and Path. U. S. Dep. Agr.

ent in abundance. In such cases the extreme degree of injury is seldom, if ever, realized by those who are not financially concerned. The grain becomes shriveled up to almost nothing in from one to three days, and the straw at harvest time is almost rotten and is easily rubbed into small bits. The accompanying illustration of healthy and shriveled grains of Jones Winter Fife wheat, from two distinct localities in Kentucky, harvested in 1894, shows the disastrous effects of this black-stem rust. Such blasting effects, however, occur, as a rule, only in southern latitudes, but are occasionally seen in Ohio, Michigan, Indiana and southern Illinois. In the South the destruction is quite often complete, and in such cases the fields are pastured instead of harvested in order to get as much good from them as possible. In Texas vast districts of some of the best wheat lands of the plains have been abandoned by wheat growers, solely on account of the destructive effects of this parasite. So far as known, there is no resistance against this rust by any variety. The very hard durums, which are practically proof against orange-leaf rust, yield readily to the black-stem rust. As yet the life history of the rust in this country is not wholly understood, and until it is there can be but little hope for the wheat industry in the South.

On the whole, then, the outlook for wheat culture in this country is good, provided proper attention be given to the many possible improvements such as herein suggested. Wheat is just like any other product, in that prices are badly affected by any over-supply of a poor article. A moderate production of a good article, brought about by a diversified and scientific system of farming, with a proper outlet for the product, is sure to develop and maintain a profitable industry.

Every regular grain dealer should identify himself with at least one association organized to advance the interests of his trade.

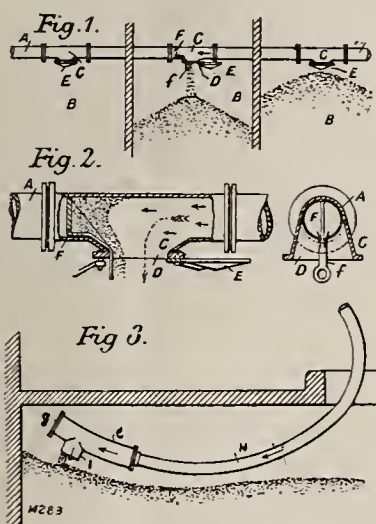
Consul Heenan of Odessa, who informed the state department at Washington of the poor crop of wheat in Russia, has sent to the Agricultural Department samples of wheat which yielded 14 bushels per acre when the average for that section was only 4 bushels. He says that in doing so he thought it might be advantageous to the department to experiment with this wheat which gave an exceptional yield in such a poor year. The wheat is of spring sowing, and is known as ulka. It is not as hard as some varieties, but is a favorite for foreign buyers, and gives better satisfaction to millers than others of the varieties.

MEANS FOR DELIVERING PNEUMATICALLY CONVEYED GRAIN.

America seems to be a little slow in adopting the pneumatic system of transferring grain. Several American engineers have been granted a number of patents covering devices for conveying grain pneumatically, and one system has been perfected, but as its sale has not been pushed, few grain handling plants are equipped with it. At the Millwall Docks, London, air has been used quite successfully. The inventor of the system used there is F. E. Duckham, the engineer in charge. Mr. Duckham has taken out many patents on parts, and improvements of his system, and continues to improve the equipment with new devices. The pneumatic grain handling plant at Millwall Docks is without doubt the most complete plant in existence, including, as it does, a pneumatic grain transfer boat, and a large storage elevator equipped with improved facilities for handling grain pneumatically.

Mr. Duckham's latest improvements in facilities for transferring by air, relate to means for delivering pneumatically conveyed grain. A line of piping extends over the various bins of a warehouse or granary. It is connected at one end with the conveying pipe coming from the grain blowing and conveying appliances used for the pneumatic conveyance of grain by a forced current, and is closed at the other end. At the underside of this line of piping and at intervals corresponding to the various bins, pipe enlargements having outlet orifices D and removable covers E are provided. The enlargements of the pipe at the point of discharge is designed to effect a diminution of the velocity of the air current at this point, and in order that the grain traveling at a very high velocity through the pipe may be deposited gently, the orifices are placed axially at right angles to the line of piping, so that the direction of motion of the grain must be abruptly changed in order that it shall pass out at the orifice, which for the time being may be open.

Now while the air flows directly to the outlet, the momentum of the grain is so great at the high



velocity at which it travels in the pipe that its inertia would cause it to overshoot or pass beyond the discharge orifice, and means are, therefore, provided whereby the grain is brought to rest so that its initial velocity being thus destroyed it will flow slowly in the new direction. The arrest of the grain and the change in the direction of its motion is produced by closing the bore of the pipe A at a point beyond the orifice at which the grain is required to be discharged, the effect being to cause the grain carried by its momentum over the opened aperture to bank up in and to choke the pipe just beyond the said aperture, the grain thus banked up forming a self-constituted, elastic, and constantly renewed buffer against which the grain subsequently arriving may be projected without injury. It is generally most convenient to close the bore of the pipe A just beyond the aperture at which the discharge is to be effected, and for this purpose there is provided a baffle-plate F having a shank f, whereby it is adapted to be passed through the delivery aperture D into the bore of the pipe A, and to be there retained by the engagement of the shank with the

lower side of the enlargement C, the baffle being situated so far beyond the aperture D as to leave room for a bank of grain to form for the purpose mentioned.

To facilitate the dispersal of the air and permit of the quiet deposit of the grain, the sectional area of the orifice D is made considerably greater than that of the pipe A, the preferred form of the pipe enlargement section C being shown in Fig. 3. The covers E of the orifices D are preferably pivoted at one side, and secured at the other by a locking bolt, so that they may be readily opened and closed as required, all being usually closed except the one from which the grain is to be discharged. In Fig. 4 is shown the invention applied to the terminal nozzle G of a flexible pipe H adapted to be passed through the hatchway of a vessel or bin. The nozzle G is made about twice the diameter of the pipe H, is closed at the end g, and provided with an outlet I at the underside, of about the same diameter as the nozzle.

SUE FOR OVERCHARGES.

Ruffcorn & McCartney, grain dealers who operate elevators along the lines of the Chicago, Burlington & Quincy Road in Iowa, have commenced an action against the company in the federal court which, it is claimed, is merely the first of a number of suits that will be brought.

The charge is that the big concerns operating systems along the lines of the several roads have been favored in the matter of rates to the detriment of the smaller dealers, or those that are not recognized by the railroads. It is claimed the published tariffs are enforced against the small shippers and that the big fellows are quoted either a secret rate or receive a rebate that almost amounts to giving them a monopoly of the business. The one case brought asks for judgment for \$2,500 on a limited number of shipments made from three stations and is considered merely in the light of a test case.

Ruffcorn & McCartney state in their petition that they operate elevators at the towns of Osceola, Woodburn and Mussey, on the line of defendant's road, and are compelled to rely upon it to get their grain to market. It is charged that the regular rate on shipments made by them from Osceola is 30 cents, from Woodburn 29 cents and from Mussey 31 cents per hundred pounds. Continuing, the petition charges that competitors have been granted a uniform rate of 20 cents on shipments from all points to Chicago. The petitioners claim this is a violation of the interstate commerce law and ask that they be given judgment against the railroad company for the difference between what competitors paid and what they paid on their shipments, which it is alleged amounts to \$2,500.

OFFICIAL FLAXSEED INSPECTION REGULATIONS AT CHICAGO.

The regulations for the grading and inspection of flaxseed, adopted by the Board of Directors of the Board of Trade of the city of Chicago, on July 20, 1897, were, by vote of said Board, at its meeting held Aug. 10, 1897, amended to read as follows:

Section 1. The weight per measured bushel designated for each grade shall be that of commercially pure seed.

No. 1 Northwestern Flaxseed—Flaxseed to grade No. 1 Northwestern shall be mature, sound, dry and sweet. It shall be Northern grown, or have the usual characteristics thereof. The maximum quantity of field, stack, storage or other damaged seed intermixed shall not exceed 8 per cent. The minimum weight shall be fifty-one (51) pounds to the measured bushel.

No. 1 Flaxseed—No. 1 flaxseed shall be sound, dry and free from mustiness and carrying intermixed not more than 20 per cent. of immature or field, stack, storage or other damaged flaxseed, and weighing not less than fifty (50) pounds to the measured bushel.

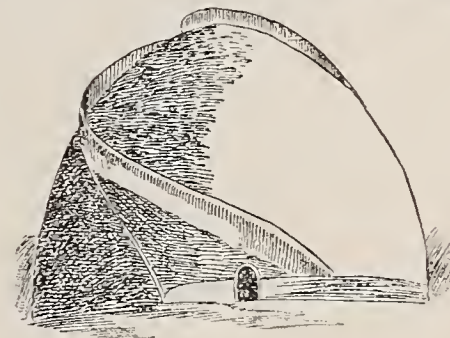
Rejected Flaxseed—All damp and musty flaxseed and that carrying intermixed, immature or field, stack, storage or other damaged flaxseed in excess

of 20 per cent., and weighing not less than forty-six and one-half (46½) pounds, shall be graded "Rejected."

No Grade Flaxseed—Flaxseed that is wet, moldy, smoky, warm or in a heating condition, or is intermixed with burnt seed, or is in anywise unfit for temporary storage, or weighs less than forty-six and one-half (46½) pounds, shall be graded "No Grade."

THE FAMINE GRANARY AT BANKAPOOR, INDIA.

During recent years many plans have been worked out on paper for providing grain supplies for the inhabitants of Great Britain, so that in case the country became involved in war, and the food supply was shut off by the opposing navies they would not be conquered by hunger. Sentiment is so strong in



FAMINE GRANARY AT BANKAPOOR.

favor of the building of national granaries, that a journal called War and Famine has been started to promulgate ideas favorable to the establishment of national storehouses.

If the champions of this movement would go to Bankapoor in Bengal Presidency, India, they would find a great monument to man's misconception of what is needed along this line. The immense granary illustrated herewith was constructed at Bankapoor in 1786, by the Government, for the prime purpose of storing grain in years of bountiful harvests, so that the people would not starve when the crops failed. It was intended to erect a number of the granaries at different points of vantage in the Presidency, but the "gola" at Bankapoor was the only one completed, and it has never been used for storing grain, although famine has visited the district several times since the completion of this beehive shaped "gola."

This immense masonry structure serves as an expensive reminder of the impracticable scheme. If there was any need of constructing granaries for years of famine, private capital would have erected them long ago. The marked improvement in transportation facilities during late years has annihilated distance, and made all fields tributary to any market that is willing to pay the price.

The secretary of the Missouri State Board of Agriculture has issued a general summary of crop results for three years past. The corn yield for 1895 was estimated at 250,000,000, for 1896 200,000,000, for 1897 estimates are from 170,000,000 to 183,000,000. Wheat in 1895 was 17,000,000, in 1896 12,710,000, for 1897 9,400,000 bushels; oats, 20,000,000 bushels this year, against 22,660,000 bushels last year.

A statement of the movement of grain and flour from Superior, Wis., has been issued for the crop year ending August 31. The total shipments of grain and flour were, in round numbers, 94,000,000 bushels, as against 93,000,000 the year before. The receipts were 89,000,000 bushels and for the previous year they were 100,000,000 bushels. While the wheat receipts fell 10,000,000 bushels below the year before, there were 700,000 more barrels of flour taken through than formerly, and the receipts of coarser grains showed a considerable increase, so that the total movement of grain, manufactured and otherwise, fell below the previous year only 1,600,000 bushels. The flour movement amounted to 6,430,295 barrels, as compared with 6,081,000 barrels the previous year. The production fell from 3,403,600 in 1895-96 to 2,631,380 in 1896-97.

THE BIG WHEAT CROP.

The harvest time is over, an' the youngsters all air gay, An' a actin' like as if they felt that Ceres 's come to stay. The feelin' must be ketchin' sure, for over all the lan' There's shouts of merry laughter, the same we all kin' stan'.

The old folks all air patient, an' no joy they try to stop; They know they're all rejoicin' at the

Big

Wheat

Crop.

—Sallie Hughes, Corpus Christi, Tex.

COMMUNICATED

[We invite correspondence from everyone in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

USE OF STATE WEIGHTS NOT COMPULSORY.

Editor American Elevator and Grain Trade:—In reference to the establishment of a state weighing department, I am directed by the State Board of Railroad and Warehouse Commissioners to say that there was a statute passed in reference to state weighmasters, but by some oversight the weighing was not made compulsory, and therefore the office was not self-sustaining.

Very respectfully,

B. B. RAY.

Secretary Railroad and Warehouse Commission,
Springfield, Ill.

SHORTAGES IN CORN SHIPMENTS.

Editor American Elevator and Grain Trade:—I send you a statement showing purchases and sales of corn with shortage on same, from Nov. 1, 1896, to July 1, 1897. The corn was weighed over our own hopper scales in almost all cases. Besides this, we shipped 145,385 bushels on our own weights, on which probably the shortage claims were not over 50 to 75 bushels all told. The average shortage is estimated on the basis of 500-bushel cars:

Destination.	Bought, bushels.	Sold, bushels.	Cars.	Shortage bushels.	Average shortage, per car, bushels.
Philadelphia..	151,270.09	151,116.05	302	154	1/2
Toledo.....	386,181.55	385,276.24	772	90	1 1/4
St. Louis.....	153,351.43	152,524.16	306	827	2 3/4
Portland, Me..	3,795	3,789.26	8	9	1 1/8
Decatur.....	95,979	95,521	191	458	2 3/8
Louisville, Ky.	195,251.50	194,943.54	390	308	7/8
Henderson, Ky.	19,700	19,636.14	39	64	1 3/4
New York.....	1,601.24	1,628.12	3
Chicago.....	1,612.38	1,614.26	3
Detroit.....	792.18	783.22	2	9	4 1/2
Cincinnati....	2,142.48	2,130.20	4	12	3
Milwaukee....	698.12	695.20	1	3	3
Baltimore....	782.08	775	1	7	7
Peoria.....	2,683.52	2,678.32	5	5	1
Pekin.....	15,164.16	15,101.44	30	63	2 1/10
Total.....	1,031,008.47	1,028,215.03	2,056	2,824	1 1/3

Yours truly, E. R. ULRICH & SONS,
Springfield, Ill.

FEED MILLS IN ELEVATORS.

Editor American Elevator and Grain Trade:—It seems strange that so few elevators have feed mills as a part of their equipment, when there are so many conditions favoring their operation at a considerable profit. There is an increasing demand among farmers for ground feed, and the elevator man, being constantly in touch with the farmers, should have no difficulty in finding a good home market for all he can produce. He has the material at hand to produce the feed at small cost, the wheat screenings, and offal from oat clippers and corn cleaners, are all available. It also affords a profitable disposition for damp and off-grade grain. There is also considerable demand for cob meal.

The machinery market now affords many desirable types of grinding mills, in many instances a single machine being adapted for all-around work from ear corn to small grains. Many consider the burr mills admirably adapted to feed grinding. In any event, the cost of installation of a feed plant in an elevator is small. The power required for this purpose would in most cases amount to little or nothing, as it could be utilized at times when not required in the regular work of the elevator. A feed-grinding department in an elevator would also afford more steady employment to owner or employes. Of course local conditions must be taken into consideration when considering this addition,

but I believe in most communities it offers a promising field for the elevator man that has heretofore been neglected.

Truly yours,

A. READER.

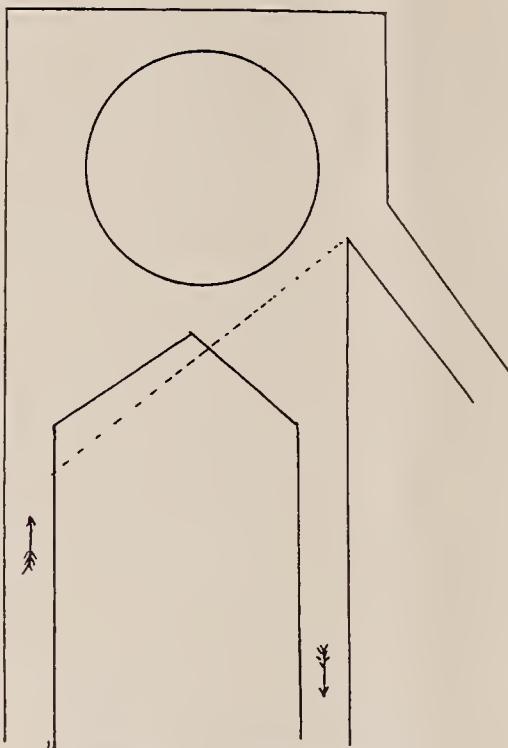
PATRONIZING IRREGULAR DEALERS.

Editor American Elevator and Grain Trade:—A grain firm of Baltimore, Md., has been buying corn from farmers at Buffalo, Ill., at Dawson, Ill., and at Springfield, Ill. Not one of the parties from whom the Baltimore firm buys has one cent's worth of improvements excepting for scoop shovel purposes. They buy promiscuously wherever they choose, regardless of rights of elevator owners. I think such work should not be countenanced by members of the Illinois Grain Dealers' Association, nor by the members of the Grain Dealers' National Association. The Baltimore firm has been written to repeatedly about this matter, and simply ignores our correspondence, although some time ago they gave us to understand that they did not wish this kind of business.

A MEMBER.

CONSTRUCTION OF ELEVATOR HEAD.

Editor American Elevator and Grain Trade:—I wish to refer to the article on "Fire Hazard of Elevator Heads" on page 54 of the August number of the "American Elevator and Grain Trade." We submit



CONSTRUCTION OF ELEVATOR HEAD.

a rough sketch of an elevator head as we build them. They have never given any trouble, nor do I think a fire could arise from the same cause as that which caused a fire in the elevator head which the article referred to. Constructing the inverted hopper under the pulley as shown by the dotted line might be a further improvement.

Yours truly, C. H. DEMPWOLF & CO.,
York, Pa.

AN ILLINOIS DUMP AND LOADER.

Editor American Elevator and Grain Trade:—I send you a further description of my grain dump and loader, which was illustrated on page 51 of the August number of the "American Elevator and Grain Trade." The size of the bin into which I dump grain is 12x14 feet, and 11 feet high, with a capacity of 1,250 bushels. This is the capacity in corn of a good sized car. The approach is 78 feet from the level of the ground to the top of the dump, making a very easy pull for the horses. The decline is about 40 feet from the top of the dump to the ground. The conveyors are 2 in number, one 32 feet long, made on the drag belt order with flights 2 1/4 x 10 inches, 8 inches apart. It drags the grain to a point 14 feet above the ground, where it is discharged into a car. The other conveyor is 12 feet long, and is placed at the foot of the dump, running its full length. It receives the grain from the dump and passes it to the conveyor on the incline. The belts are connected by sprocket wheels and chain direct with the line shaft, where drive belt pulley is driven from the engine by an endless belt, either leather or

chain. There is only one sink under the dump at present, with a place to erect another if desired. It has a capacity of elevating from 600 to 800 bushels per hour.

The description of the dump and loader, as it appeared in the August number, was incorrect in one or two details. It says the grain falls from the inclined belt carrier just inside the car door, and must be shoveled to the ends of the car as though it were thrown into the car from a wagon. This is not the case, as I have a 12-foot Webster Flexible Grain Spout attached to the upper end of the inclined belt carrier, which throws the grain to the ends of the car in the same manner that an attachment of the kind would do from any elevator. Again, the article speaks of the sink being small. The fact is, it holds a carload of 1,200 bushels of shelled corn. It also spoke of the driveway as being supported by frail framework. I will say that it is as strong as any well built driveway can be made.

Yours truly, HENRY M. HASTINGS,
Cooksville, Ill.

THE SEELEY PATENT—A CARD FROM MR. SEELEY.

Editor American Elevator and Grain Trade:—I notice that your editorial in May number has called forth a number of letters you have published on the subject of my patent No. 288,371 for Improvement in Elevators, which are calculated, I think, to do me injustice.

I was an original inventor, and I used the diligence, and took the steps that the laws require, and obtained my patent in a public and honorable manner, and I am entitled to all the benefit and advantage that the law gives me.

I deny that there has ever been such "public use" of my invention, either before or after the date of my patent, as would invalidate it under the laws and decisions of the courts. It may be that someone else may have conceived a similar idea, and may have privately made use of it, yet if they did not object or intervene in the patent office at the time my application was pending, what right have they now to complain? The courts have rendered many decisions sustaining patents granted in good faith to the diligent, and I am confident my patent will be sustained if any controversy should arise.

We cannot well try a lawsuit in the columns of your paper, and it would be useless for me to cite decisions of the courts when the facts are in dispute. I took the opinion of good counsel before I ever attempted to collect for infringements, and I am contending in good faith for what I believe is my right.

Respectfully, M. F. SEELEY.
Kansas City, Mo., Sept. 9, 1897.

GRAIN DEALERS' ASSOCIATION OF KANSAS.

Editor American Elevator and Grain Trade:—The Grain Dealers' Association of Kansas will hold a meeting in Topeka on October 12 and 13. We now have a membership of 185, and are still growing. The greatest trouble we now have to contend with is the stealing going on through the Kansas City elevators. After the investigation conducted by the committee appointed by the Board of Trade in Kansas City last winter, we hoped that dealers shipping to that market would have protection from certain elevators, but we find the stealing still goes on with no relief in sight. Our organization is in a very prosperous condition, and, with but few exceptions, the dealers are working in harmony. We are now admitting the dealers in Oklahoma, and they advise me of their expectations to organize a local association in a short time; in fact, they have their by-laws printed.

I quote the following from a letter received from Mr. A. T. Haines of Kingfisher, Okla., which is a sample of many, showing how the members appreciate the organization: "In reply to your letter, will say that we are having the constitution and by-laws printed, and shall be only too glad to have you come down when we get matters in shape, which we think will be in three or four weeks, but will advise you of the time."

We have submitted the plan of consolidation with

the Grain Dealers' National Association to our members in the following letter:

"The delegates selected by the National Association and the different local associations to draft a constitution and by-laws, by which the different state and local associations might be represented in a national convention, thereby making the National Association a delegate body, composed of the various state and local associations, beg leave to submit the inclosed constitution and by-laws, and ask your careful consideration of the same, and vote for the adoption or rejection at your earliest convenience.

"We realize that this is the only successful plan of maintaining and perpetuating a National Association. We trust that you will see the need of a National Association sufficiently to heartily indorse this movement. If the constitution does not meet your hearty approval, in each and every particular, the various state and local associations have full power to make any changes they may see proper at any regular delegate meeting.

"All of the state and local associations fully realize that there are many questions that they cannot carry to a successful solution without the aid of the National Association. Some of this work is of too much importance to let drop on account of the additional expense of maintaining the National."

Up to this date (September 11) we have received but two opposing votes, and are now ready to fall in line to maintain the National Association.

Very truly yours, E. J. SMILEY, Secretary.
Dunavant, Kans.

SOME REASONS FOR ORGANIZATION.

Editor American Elevator and Grain Trade:—I find associations are being formed in many sections, and are doing much good. Many dealers have never taken into consideration the fact that every locality is justly entitled to the grain raised in its particular section. In order that each should have its share, all the grain dealers in a county should, if possible, pay the same price for grain. I believe if the grain dealers in each state would meet once or twice a year and talk over the situation, much good would be accomplished, and local organizations formed that would do a world of good. Too few farmers consider the fact that an elevator located near them is an advantage to them as a convenience in marketing their grain, and because of this fact adding value per acre to their land should they wish to sell it.

I find many of the farmers will take a day or two for running over the country to find the best market, and then haul their grain 4 or 5 miles further than their nearest market for one-half cent per bushel, because their home dealer cannot meet the price of some competitor who is bulling the market. They fail to note that they are really earning the extra half cent by the long distance they haul, and that they are tearing down their own market.

Too many of our warehousemen are always ready for a scrap (in a financial way) with their neighbors, and will pay more than they can afford in order to beat a competitor. Who is benefited? Nine times out of ten no one is a gainer. The farmer does not make enough extra money to pay for time lost in hunting a market and hauling to it. The dealer who pays the advance handles the grain for nothing, in order to get it away from a competitor who is trying honestly to make a living handling grain.

If the farmer knows his home dealer pays as much as anyone else, he will haul his grain to him, at a considerable saving of time, and will also have the satisfaction of knowing that he is getting as much as anyone else. I realize that it is hard to get dealers together, but when once together they soon learn that their competitors are not such bad fellows after all. Where associations are formed for the purpose of doing away with strife the price should be kept as near the market as it would be by a dealer who would try, if no association existed, to do business on business principles.

There is a matter of importance that merits the attention of dealers, and that is the loaning of sacks to farmers by grain dealers. I think it should be discussed not only in trade journals but in all papers. My idea is that if the farmer had to furnish

his own bags he would build granaries at home, and we would not have the large movement of grain right after harvest that we now have, and the farmer would be a gainer.

Yours truly, E. A. GRUBBS.
Greenville, Ohio.

ILLINOIS DEALERS WILL MEET AT PEORIA.

Editor American Elevator and Grain Trade:—The meeting of the Illinois Grain Dealers' Association will be held at Peoria, Ill., October 19 and 20. It is difficult to make a perfect program of entertainment thus far in advance. The first meeting will take place in the rooms of the Peoria Board of Trade in an informal conference between the dealers and the members of the Peoria Board of Trade from 10 to 12 a. m., October 19. The regular meeting will be called at 1:30 p. m. on the same day in the Elks' Hall. This hall is in the Niagara Building, and is thoroughly suitable for a gathering of this kind, there being aside from the assembly room a number of parlors adjoining which can be used for committee rooms and miscellaneous purposes.

It is the intention, when the afternoon meeting is completed at 5 o'clock, for the Grain Dealers' Association, with the Peoria Board of Trade, to take a steamboat ride on Peoria Lake. Supper will be served on the boat. On the morning of October 20 a second meeting will be held in the Elks' Hall, and after that, at the pleasure of the Association, cars will be furnished to take all who desire through the railroad yards to inspect the new elevators, which will be completed at that time. The two new elevators which are being built to replace those destroyed by fire recently are the most modern and complete of their kind in the United States, and we consider it would be of great interest to most of the grain dealers to see them. There will be other features on the program which we can add later, but this is a general outline. I trust that grain dealers of Illinois will feel the importance of attending the meeting, as we are anxious to make this a great success. I believe in the Association, and think its work will do a great deal of good throughout the state for the trade.

Very truly yours, A. G. TYNG JR.,
Chairman Committee on Arrangements,
Peoria, Ill.

ILLINOIS DEALERS WILL MEET: SEVENTY-FIVE NEW MEMBERS; CHANGES IN LIST.

Editor American Elevator and Grain Trade:—At a meeting of the directors of the Illinois Grain Dealers' Association on September 7 it was decided to hold the next meeting on October 19 and 20 at Peoria. There was an effort made to have the meeting at an earlier date, but it was opposed on account of being so near to the dates of the St. Louis and Springfield fairs. The directors were therefore unanimously in favor of making the date at the time stated. I inclose a list of new members voted upon at our meetings held July 7 and September 7:

Herb & Son, Emington.
J. M. Maguire, Wilson.
M. R. Walsh, Campus.
Taylor Bros., Emington.
M. F. Reilly & Co., Reddick.
Beem & Croddick, Shelbyville.
Metzger Bros., Pana.
T. J. Lester, Pana.
P. Cooper, with Sidell Grain Elevator Co., Shelbyville.
S. A. Hayward, Tremont.
J. Velde, Tremont.
O'Hara, Baldridge & Co., Carlock.
Sharp Bros., Congerville.
Roberts & Mochel, Morton.
W. S. Russell, Allentown.
Quigg, Tanner & Co., Minier.
J. H. Hawes, Atlanta.
Ward Kenyon, Mt. Joy (Atlanta P. O.).
W. E. Kreider, Tonica.
James Kitchen, Mattoon.
McDougal & Velde, Peoria.
Boner & DeBolt, El Paso.
J. M. Murray & Son, Enreka.
H. Dierking, Secor.
D. Evans, El Paso.
Wetzel Bros., Wetzel (Horace P. O.).
Durbin & Tivis, Loxa.
W. D. Castle Co., Gridley.
Gilmore French, Gridley.
E. Keller, Fairbury.
Andrew Drohan, Danvers.

Francis & Allen, Forrest.
W. W. Gray, Wing.
R. J. Riley & Co., Saunemin.
J. R. Hawthorne, Cookville.
J. E. Pool, Essex.
Fuller & Spiller, Gardner.
H. E. Snyder, Gardner.
Hohn & Siemantel, Dwight.
J. A. Simpson, Minonk.
Jerome Howe & Son, Wenona.
J. H. Taggart & Son, Wenona.
James Shields, Benson.
Noble Bros., Foosland.
S. I. Armstrong, Hastings.
O. S. Nash, Sharpsburg.
J. L. Boyd, Palmer.
J. N. Hairgrave, Virden.
Gibbs & Stuckey, Wing.
Jackson & Cavitt, Woodland.
J. M. Gray Jr., Saunemin.
E. T. Holloway & Son, Wing.
S. E. Peterson & Co., Benson.
Thirty-first St. Elevator Co., L. M. Fairbanks, secretary, Chicago.
B. M. Stoddard & Son, Toluca.
T. C. Colehower, Toluca.
G. A. Sauer, Rutland.
W. H. De Long, Sadorus.
F. E. Sharp, Deer Creek.
H. J. Puterbaugh, Mackinaw.
Marshall & Stoltz, Deer Creek.
Nixon & Co., Goodfield.
W. E. Wilson, De Witt.
Geo. Fooks, Waggoner.
Beekman & Rayner, Waggoner.
C. B. De Long, Fithian.
J. F. White, Champaign.
Paul Smith, Lincoln.
Chas. B. Johnston, Washburn.
La Rose Grain Co., La Rose.
Astout Grain Co., Garfield.
Swift Winter, Garfield.
H. Ream & Son, Lstant.
Bell Bros., Lstant.
Banta Bros. Co., Lowpoint.

The following corrections should be made in list of regular dealers compiled by this Association:

Insert L. Hezenwinkle, at Herrick.
Insert Middle Division Elevator Co., at Heyworth.
Insert John Sherry at Flanagan.
Insert L. D. Lane at Potomac.
Insert C. B. Munday & Co., at Butler.
Cancel P. Risser & Son, at Roberts.
Cancel Bartlett, Frazier & Co., at Strawn.
Insert H. J. Pnterbaugh, at Mackinaw, succeeds Pnterbaugh Bros.
Insert Moats & Reedy, at Towanda, instead of James Hatfield.
Insert Skinner & Campbell, at Stanford, instead of Frank Murphy.
Insert H. J. Puterbaugh, at Lilly, succeeds W. L. Nixon & Co.
Insert Hillsboro Milling Co., instead of Glenn Bros., at Hillsboro.
P. G. Jones has sold out to Crocker Elevator Co., at Cisco.

Yours very truly, B. S. TYLER,
Secretary.

Decatur, Ill.

CHANGES IN MINNESOTA GRADES.

The Minnesota Railroad and Warehouse Commission has adopted a rule which will be the means of admitting much wheat to No. 2 and No. 3 that otherwise would be placed in a lower grade. The rule is as follows:

"Hard, flinty wheat of good color containing no appreciable quantity of soft wheat, will be admitted in the grades of No. 2 Northern, and No. 3 wheat, provided the test weight of the same is not more than one pound less than the required test weight of said grades, and provided that in all other respects said wheat is qualified for admission in said grades."

Much of this year's spring wheat contains shrunken grains, and the enforcement of this rule will give it a higher grade in all markets having Minnesota inspection. Giving wheat a higher grade than it was entitled to under the rules of last year may give it a relatively higher market price temporarily, but buyers will soon adjust prices to conform to the relative qualities of wheats offered.

The Minnesota rules governing the grading of flaxseed will be maintained as heretofore.

In some parts of Illinois rich farmers have on hand from 5,000 to 25,000 bushels of corn.

QUERIES: AND: REPLIES

[Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.]

No. 3. Names of Dealers Wanted.

We would like to secure the names of parties dealing in grain in Richmond, Va., St. Louis, Mo., and in Louisville, Ky., from whom we may buy wheat and corn by the carload.—S. J. BROWN & CO., Nealsville, N. C.

No. 4. Exterminating Rats.

We are greatly troubled with rats working in our cribbed corn, and would thank you for any information you may have at hand that will help to relieve us of these pests. We have corn cribbed at about two hundred stations, and would like to go at it in a systematic manner.—PRATT & CO., Decatur, Ill. [One of the most successful means now employed for exterminating rats and mice is the use of bisulphide of carbon. Cotton batting heavily saturated with the bisulphide should be poked into the rat holes, in the ground, which must then be so covered as to prevent the escape of the fumes. The bisulphide forms a deadly gas several times heavier than the atmosphere, which penetrates the innermost recesses of the rodents' underground homes. Fires and lights must be kept from the fumes, as otherwise an explosion will result. In an elevator, mill, or other building, which can be kept air tight for say 24 hours, rats, mice and all insect life can be destroyed if a large amount of the bisulphide is thoroughly distributed and exposed about the room. As stated above, there must be no fire or light about the building until it has been well ventilated. This is clearly a case where "an ounce of prevention is worth a pound of cure," as it is generally easier to prevent rats from getting into cribs than to get rid of them after they have once found lodgment. Preventive measures should certainly be taken following an effort at extermination, else the nuisance will by no means be permanently abated. The bottom of the crib should be free from knotholes and other openings and elevated a foot or more above the ground by posts which should offer at the top no place of lodgment for the rats. The bottom of the crib should extend out several inches beyond the supports, or a board 8 to 12 inches wide may be placed all around the outside extending upward and outward from the bottom of the crib at an angle of about 45 degrees, so as to prevent rodents easy access to crib. Stones, boards, etc., should be removed from around the crib so as not to afford the rodents an easy means of getting into the crib.]

OHIO LAW REGULATING USE OF WHEAT TESTER.

A number of grain buyers and millers of Ohio have combined to bear the expense of getting a decision of the State Supreme Court on the constitutionality of what is known as the Deaton Law. It was passed March 1, 1894, and is entitled an act to prevent the use of any measure other than the standard half-bushel in determining the grade of wheat, when purchasing or receiving same in barter or exchange from the original producer.

The law provides as follows:

Section 1. Be it enacted by the General Assembly of the state of Ohio, that it shall be unlawful for any person, commission merchant, miller, dealer, grain inspector, corporation, company, firm or association, either by himself, itself, officer, agent or employee, when purchasing or receiving in barter or exchange for flour or otherwise, from the original producer, his agent or employee, to use for the purpose of testing or determining the weight, grade, milling or market value of wheat, any measure other than the standard half-bushel furnished this state by the United States; and the use of any fractional part of said standard half-bushel measure for such purpose will be a violation of this section.

Sec. 2. Any person, commission merchant, miller, dealer, grain inspector, corporation, company, firm or association, or any person acting as officer, agent or employee, found guilty of a violation of section 1

of this act shall be fined not less than \$25, nor more than \$100, or imprisoned in the county jail not more than 30 days, or both, at the discretion of the court. Fines collected for violation of this act shall be paid into the county treasury to the credit of the county fund.

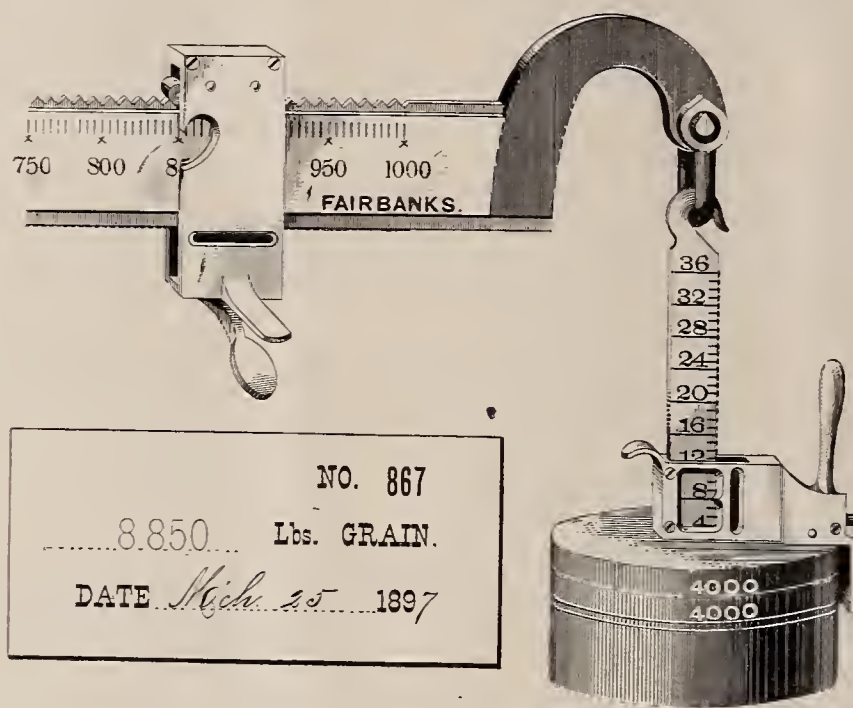
Sec. 3. It shall be the duty of the prosecuting attorneys to see that this act is enforced in their respective counties; and for each conviction of violation thereof they shall be entitled to a fee of \$20, to be paid out of the county funds upon the allowance of the commissioners of the county.

Sec. 4. This act shall take effect 60 days after its passage.

A NEW DEVICE FOR REGISTERING HOPPER SCALE WEIGHTS.

All grain men have long realized the absolute need for a simple, yet always reliable, registering device for grain hopper scales. This now seems to have been accomplished in the new Fairbanks Registering Beam illustrated in the accompanying cut.

This arrangement is exceedingly simple, and very durable. It consists of a number of raised figures of hard steel, securely fastened to the under side of the



A NEW DEVICE FOR REGISTERING HOPPER SCALE WEIGHTS.

beam, corresponding with the regular graduations; also on the edge of the counterpoise there is a corresponding raised figure for each graduation. The figures on the counterpoise represent the thousands, and those upon the beam represent the hundreds, and divisions of hundreds; the operation in weighing is the same as with the ordinary scale having weights and counterpoise. The card or ticket is inserted first in the slot in the face of the poise, and then in the slot in the counterpoise, and by means of the thumb piece a record is impressed on the ticket, which cannot be anything but absolutely correct. The blank ticket is printed so that a duplicate ticket may be made if desired.

Most of the large elevators which have recently been erected are equipped with these registering beams; notably the Erie Elevator at Chicago, Export Elevator at Buffalo, the Cleveland Elevator at Cleveland, the Santa Fe Elevator at Winfield, Kan.; the Burlington and Iowa Elevators at Peoria; the Louisville & Nashville Elevator at Pensacola, Fla.; the Atlantic Elevator at Parry Sound, Canada, and in the American Elevator being built at Manchester, England, these beams are to be employed. The registering beam can be applied to old scales now in use as well as to new scales. Fairbanks, Morse & Co., Chicago, will be glad to furnish full details and prices upon application.

F. W. Thompson, manager of the Ogilvie Milling Co., Winnipeg, estimates the wheat yield at from 15,000,000 to 16,000,000 bushels, which is considerably less than current estimates.

A BUSHEL OF CORN IN INDIANA.

Indiana's last Legislature was clearly a farmers' organization. In addition to enacting a law regulating the size of tester dealers should use when buying wheat from the producer, it enacted a law requiring buyers to accept 68 pounds of ear corn for a bushel. Unfortunately the Indiana dealers are not organized, or they would soon knock out the law. In some districts they have very properly evaded the law by refusing to buy by the bushel. They bid on corn in units of 70 pounds. It would further simplify the business if they would buy only in units of 100 pounds as is done on the Pacific Coast.

When a farmer approaches a grain dealer with a proposition to sell corn and asks "What's clear white worth a bushel to-day?" the dealer smiles a knowing smile and replies: "We are not buying corn by the bushel, but we are paying 22 cents for 70 pounds of good corn."

The farmer can swear as loud as he likes, but he can neither disturb the blandness of the grain dealer's smile, nor induce him to buy ear corn in accordance with "the statutes in such cases made and provided." The dealers insist that they are not violating the law which compels them to buy grain by

the bushel, or even to recognize the term "bushel" in any of their purchases.

Grain dealers in discussing the matter say they have no desire to violate or evade the statutes, but that they are completely handicapped by the laws regulating corn weight in other states to which they ship—states in which are the cities which practically regulate the markets of the world. In Illinois the law is that 70 pounds of ear corn shall constitute a bushel. Therefore if a dealer buys a 68-pound bushel and sells it to Chicago dealers he is compelled to add two pounds to it before it will be received as a bushel by the purchaser. Thus the Hoosier dealer says that by a compliance with the meaning of the Indiana statutes he would lose two pounds of ear corn on every bushel he buys and ships to the Chicago or St. Louis market. He insists that there is only a close margin on corn, and that it is a financial impossibility to recognize the 68-pound bushel without loss.

In many of the elevator offices this placard occupies the most conspicuous place on the wall: "The price quoted to-day on corn is for 70 pounds."

The dealers insist that the present law governing weights and measures is impracticable so far as the ear corn clause is concerned. This is because of the fact that it is not uniform with the law in other states. Practically all the corn raised in Indiana is shipped to markets outside the state, and a compliance with the Hoosier statutes would incur a loss to grain dealers of two pounds on every bushel

shipped, as in all other states the weight of ear corn is fixed at 70 pounds to the bushel. Shelled corn is 56 pounds to the bushel, and the law governing it is uniform with all the states. Therefore it is claimed by corn buyers that the law requiring 68 pounds to constitute a bushel in Indiana is an injustice and they are fully justified in the evasion of it. They have tried it in all kinds of corn and find that 68 pounds in the ear will not yield 56 pounds of grain. They insist that this fact alone should show the injustice of the law and the silliness of the Legislature which created it. They say that it is an attempt to force grain dealers to pay for grain which exists only in the imagination of farmers and the men who made the law. They say that were it not for the fact that all other states made 70 pounds a bushel of ear corn they could recognize the Hoosier statutes without a loss, but as it is they are handicapped by circumstances and are forced to evasion in order to save themselves.

The matter at this time is being discussed more than at any time since the law was passed. The dealers insist the law is unjust and the farmers say that they are being robbed by its evasion. There is talk among the farmers of uniting in a test case to force the dealers to an observance of the statutes.

Indiana dealers should organize and be prepared to protect their common interests. Sign the declaration published in this number and mail immediately.

THE KANSAS ASSOCIATION; NEXT MEETING; SHORT WEIGHTS.

Secretary E. J. Smiley of Dunavant, Kans., has recently sent a circular letter to members of the Grain Dealers' Association of Kansas, from which we take the following: "In order to insure a full attendance at the next quarterly meeting of the Association, we have decided to leave the time and place of this meeting to a majority of the members. We desire a full attendance, as several matters of importance will be decided at this meeting.

"There has been considerable complaint of late about short weights on grain consigned to the Kansas City market, and a number of the members have demanded that something be done to protect them. I beg to advise all concerned that the Chairman of the Short Weight Committee, appointed by the Kansas City Board of Trade, has advised your Secretary that they, as a board, were anxious to protect the interests of all persons shipping grain to that market. They have further assured me that all cases brought before said board will receive as thorough and honest investigation as is possible, and that award will be made with reference to its best judgment on the evidence it is able to obtain.

"Too much importance cannot be laid upon the weighing by shippers in the country, not only as to the condition of their scales, but care in loading. There is no doubt but there has been good reason in the past for complaint on account of some of the weighing done at Kansas City, and to remedy this is the reason why this rule has been adopted, and this committee appointed. They ask that the country shipper accept their effort in good faith, and do everything he can to assist this committee in securing the shipper correct weight.

"The Weights Committee of the Kansas City Board of Trade has sent out a notice, signed by H. L. Harmon, H. B. Perine and J. Bookwalter, in which it is stated that 'the duties of the Weights Committee under the most favorable circumstances will be difficult and disagreeable and its findings often unsatisfactory even to itself, but to the end that it may be put in possession of all the information possible to aid in arriving at the facts in any dispute, the committee recommends the following suggestions: First, every buyer should insist upon the shipper's weight and the railroad weight both being written on the back of the inspector's card by the seller at the time of the sale and the buyer should preserve this card.

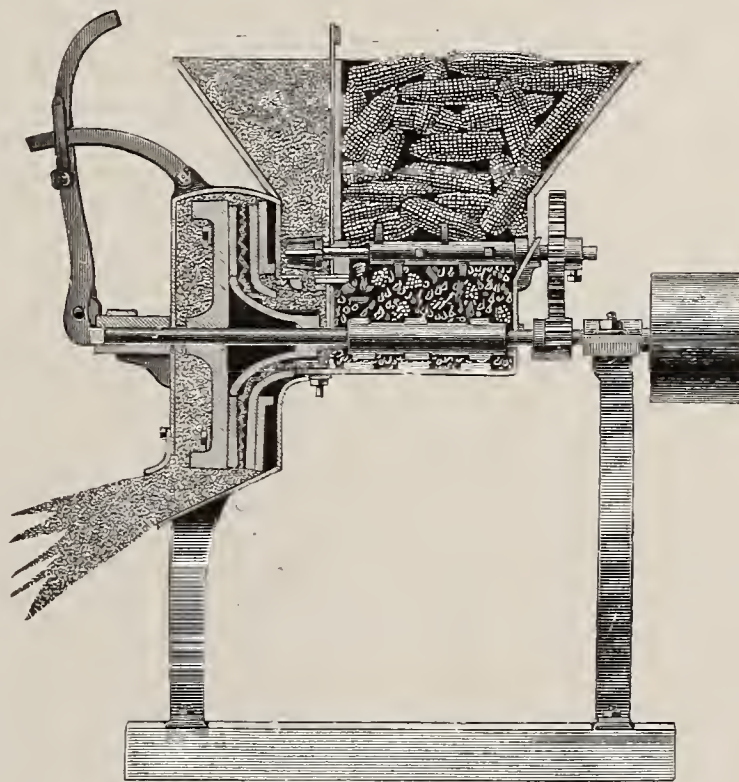
Second, on arrival at unloading track each car should be carefully examined in regard to the seals, condition of the grain doors and other conditions of the car. If seals have been tampered with or car found to be in bad and leaky condition, the seller should be promptly notified before unloading. If this is not practicable on account of rush of business in time of large receipts, the attention of some disinterested party should be called to the condition if possible. Record should be kept also of the condition of every car unloaded. If in good condition so note. If not in good condition give elaborate notes of its condition, stating carefully the particular defect. Every shortage should be reported to the committee whether it is made the subject of investigation or not. Information of this kind will be very helpful to the committee. It is the desire of the committee to make its findings as near to the facts and justice as possible, and this desirable result can be reached just in proportion to the fullness and reliability of the information it may be able to obtain, and the co-operation and aid the committee may receive from the parties in interest. Where arbitration is contemplated all promptness possible in bringing the action should be practiced, as the truth is much more likely to be arrived at

weights, and from this you can draw your own conclusions.

"I would further say to all the members, that we have made wonderful progress, and we believe by pursuing the policy we have pursued since the organization was formed that we will soon be in a position to demand justice from all those we deal with. If you have any local trouble with your neighbor dealers, advise me at once, as I believe all matters of this kind can be settled by arbitration, and I will be only too glad to assist you in avoiding trouble of this kind."

THE "INVINCIBLE" POWER GRINDER.

The accompanying illustration gives a sectional view of the "Invincible" Power Grinder, a leading feature of which is that it will grind two different kinds of grain at the same time successfully. This feature is probably unique with this mill. This is accomplished by having a partition in the hopper and a feeding arrangement for each side. The main shaft is made of cold die-rolled steel, 1½ inches in diameter, with two good long bearings filled with an extra grade of babbitt metal, easily



THE "INVINCIBLE" POWER GRINDER.

while the case is fresh and the evidence obtainable. A difficulty avoided is much to be preferred to one investigated and settled. Receivers can do much in this line by urging upon their shippers the importance of careful cooperation and careful and correct weighing, advising them that every claim must be supported by an affidavit of weight, and that if the car arrives in a leaky condition their chances for indemnity are very much lessened. I hope you will follow the instructions noted, and give this committee a chance to correct the evil. If they fail we can adopt more severe measures.

"I would request each member of our Association to do no further business with the — — — of Kansas City, or — — — — of St. Joseph. Both of these firms insist on sending bids to scalpers and scoop-shovel men, and pay no attention to the requests made of them to confine their bids to regular dealers. If you are doing business with the above-named firms and they are soliciting your business, please advise them that you will not do business with firms who buy of scoop-shovel men. Where possible confine your business to firms, members of our Association, as they have shown a willingness to help us, and we should give them our support. I would further caution you to beware of so-called commission firms, sending out bids above the market, to secure shipments, because in the end you will find that this class of buyers are the lowest bidders. They sell their grain, in many instances, to elevators that have a reputation for short

accessible for oiling. The two bearings are cast in one solid piece on the main frame, thus making it impossible for the bearings to get out of line. The shaft is carefully balanced after the flywheel and plate are attached, making a steady and light running mill.

The grinding plates are made of chilled metal, as hard as steel, and have the teeth shaped to give the best possible results for light draft and for not heating the meal. An extra set of grinding plates go with each power mill. The flywheel is inclosed inside the mill, just where it is most needed, and out of the way. They are well made throughout. In the large grinder the burrs are 14 inches in diameter, and in the medium grinder 12.

This mill is the result of years of experience and experimenting by the manufacturers, and they believe that in its present form the "Invincible" is as near perfection as can be made. It is made by W. W. Stephens & Co., 133-135 S. Clinton St., Chicago, who will take pleasure in giving our readers any further information desired.

A Wisconsin dispatch says: "A bug of a variety unknown to the farmers is ravaging the corn in the towns in the southern part of Dane County. It cleans off both husks and kernels, leaving the ears looking as if hogs had been at them. One farmer had half an acre destroyed in this way in two days. The bug is about the size and somewhat of the appearance of a bumblebee." Perhaps a closer inspection would show that the bug was a bull.



Moritz Richter, a brewer of Ogden, Utah, has made an assignment.

It is reported that Eugene Ender will build a new brewery at Rockford, Ill.

Adolph Leiber of Connellsville has purchased the Union Brewery at Tarr, Pa.

Adam Eulberg of the firm of Casper Eulberg, brewers of Galena, Ill., is dead.

The Walter Bros. Brewing Co. will build an addition to its plant at Menasha, Wis.

The Acme Brewing Co. of Macon, Ga., will increase the capacity of its plant to 100,000 barrels.

The brewery of John Glatz & Son at Oshkosh, Wis., was damaged by fire on July 30. Loss \$10,000.

The Wm. J. Lemp Brewing Co. of St. Louis, Mo., has completed a new storage and ice plant at Sedalia, Mo.

The Derby & Ansonia Brewing Co. is being organized to build a brewery at Derby, Conn., to cost \$20,000.

R. E. Drinhaus of Baltimore, Md., is contemplating building a \$100,000 brewery and ice plant at Hagerstown.

The Freodlert Brothers Grain & Malt Company is building an addition to its grain elevator at Milwaukee, Wis.

The Independent Malting Co. of Davenport, Iowa, has completed a new stock house to double its present capacity.

The depot at Chicago, Ill., of the Jung Brewing Co. of Milwaukee, Wis., was damaged by fire to the amount of \$3,000.

The Southern Malting Co. of Louisville has gone into liquidation and has been succeeded by the New Southern Malting Co.

The barley crop of Ontario, Can., shows a moderate reduction in the aggregate, owing partly to continued shrinkage in the area.

Patent No. 588,507, for malt kiln, has been issued to Peter G. Toepfer, Milwaukee, Wis. Serial No. 619,524. Filed Jan. 18, 1897.

The new Jersey & Pennsylvania Brewing Co. of Philadelphia, Pa., will build a new brewery at Camden, N. J. The estimated cost is \$300,000.

The Pacific Brewing & Malting Co. has succeeded to the business of the Milwaukee Brewing Co. and the Puget Sound Brewing Co. of Tacoma, Wash.

An effort is being made to reorganize the Gem City Brewing Co. at Quincy, Ill., and put the plant in operation. The brewery has been idle for some time.

A fire broke out in John Fay's malt house at Peoria, Ill., on July 31, and resulted in a loss of \$15,000. It had been operated until recently under lease by Stephen Kelley. An insurance was carried of \$8,000.

Robert C. Wills has purchased the interest of T. R. McQuade in the Keystone Brewing Co.'s plant at Dumore, Pa. Mr. Wills has formed a partnership with Richard Hardy of Clayville to continue the business.

Joseph Loder will build a new large brewery in connection with his Columbia Brewery at Columbia, Pa. He is making arrangements to form a stock company, with a capital of \$150,000, to operate the enlarged plant.

A Hop and Barley Exhibition will be held at Nuremberg, Bavaria, October 8, 9 and 10. The exhibition is merely local as far as titular exhibits are concerned, but the section for machinery and appliances connected with the cultivation, etc., of barley and hops is to be international.

The chimney of the American Brewery at New Orleans, La., was struck by lightning recently. The brick masonry which supported two large boilers was demolished and one of them fell to the ground. A few of the workmen who were in the

vicinity of the boilers were scalded by steam and otherwise injured.

The Consumers' Brewing Co. of Lowell, Mass., has issued \$100,000 worth of new stock for the purpose of building and equipping a new ale and porter brewery.

The American Malting Co., the organization of which the daily press has been heralding for some time as a gigantic trust, is approaching formation. The company will be capitalized at \$30,000,000. Half of this stock will be preferred and on this there is a guarantee that it will pay 7 per cent. annual dividends. The firms of Milwaukee which are interested in the company are the Pabst and Schlitz brewing companies, the Hansen Malt and Hop Company, William Gerlach & Co., the Kraus-Merkle Malting Co. and the Milwaukee Malt and Grain Co. Among the Chicago firms whose business will be absorbed by the company are: J. Weil, John Carder Jr., Brand-Bullen-Gund Company, L. I. Aaron, Carden Malting Co., Hale & Curtis, W. H. Purcell and Albert Schwill & Co. The promoters of the plan of organization claim that it is not a trust, but a mere pooling of malting interests to systematize business and to reduce expenses, and will not operate to increase the price of malt.

THE BILL OF LADING RATE NOT ALWAYS LAWFUL.

A correspondent asks where the Supreme Court has decided that an error in quoting a rate cannot change the rate, or held that a railroad company cannot be forced to carry freight at the rate contracted. For the benefit of the shipper and others who are in the dark regarding the legal rate of freight we will quote the Interstate Commerce Commission on this point. It says, the importance of some statutory requirement which will make it the duty of carriers to observe their lawfully published rates in issuing bills of lading or shipping receipts is amply demonstrated by decisions rendered during the year by the Federal courts.

The United Supreme Court has decided in *Gulf, Colorado and Santa Fe Railway Company vs. Hefley et al.* (158 U. S., 98) that all railroads carrying interstate freight are subject to the provisions of the act to regulate commerce, and that the only rule of compensation which can be followed in regard to interstate shipments is the rate expressed in tariffs published at stations and filed with the commission in accordance with the requirements of that act. The Texas law makes the bill of lading rate govern, and contains a provision for the recovery of cumulative damages in case of violation, while the Federal statute prohibits carriers from deviating from tariff rates published and on file, and provides penalties for any departure therefrom.

Hefley, the consignee in this case, did not eventually pay more than the bill of lading called for. A reduced tariff which had been established by the carriers had not yet been posted at the destination point when the freight arrived, and the agent insisted upon payment of the old rate, which was published there, and apparently still in force, but after communicating with the company's office he was instructed that the proper tariff rate was named in the bill of lading. The goods, however, were thereby withheld from Hefley for a day, and under the Texas law he was entitled to recover the full amount of the freight charges for each day the company withheld the goods and refused to accept the rate named in the bill of lading. The action, therefore, was to recover the full amount of freight charges because of the detention for one day.

The shipper obtained a judgment in the Texas County Court, and the case was brought to the Supreme Court of the United States on writ of error. As stated in the opinion, both statutes might have been held operative on the facts of this case, for the bill of lading charge was really the rate specified in the interstate tariff actually in force. But the court went beyond this, and held that the real matter presented for decision was whether these two statutes, prescribing different rules on the same subject-matter do not expose a party to a conflict of duties. This was found to be the fact, and the

court decided that in the case of an interstate shipment the state law must yield. The case was accordingly remanded to the county court of Milan County, Texas, for further proceedings not inconsistent with the opinion. No attention appears to have been paid to the failure of the defendant to post its joint tariff at the point of destination, and this was probably because the decision was directed only to the question of conflict between the Federal and state laws.

Besides the decision upon the main question, in the opinion of the court are found statements as to the law on other questions which, though not made prominent in this case, are important. It is declared that "all railroads carrying interstate freight are subject to the provisions of the act." It is also said that the St. Louis and San Francisco and the Gulf, Colorado and Santa Fe, separate corporations, are each of them bound to observe the joint tariff issued by them and filed with the commission, and that, under section 10 of the act, the carrier, or any agent or person acting for the carrier, is subject to a fine not exceeding \$5,000 for charging on transportation described in such tariff any greater or less compensation than is therein specified.

The decision in the above-stated case has recently been followed by the St. Louis Court of Appeals, where Charles Gerber, a St. Louis merchant, had been required by the Wabash Railroad Company to pay, under tariff rates in force, freight to the amount of \$300 on a car of oranges from California. Instead of \$262, the amount called for by his bill of lading, Gerber declined to pay the excess, replevined his goods, and judgment was rendered in his favor by the Circuit Court, but the Court of Appeals reversed the decision on the ground that the courts cannot enforce a contract made in violation of the Interstate Commerce Law. The discrepancy between the rate named in the bill of lading and that fixed by the tariff was caused by the failure of the California shipping clerk to take account of the fact that the oranges were to be kept iced or refrigerated in transit, for which a higher rate was in force over the line.

It may be said on reading the Gerber decision that the law already makes it unlawful for carriers to issue bills of lading containing rates different from those expressed in published tariffs, the court having distinctly held that—

"It is unlawful for a common carrier to issue bills of lading or receive, or demand a rate of freight variant from the rates or terms for such shipment as shown by the schedules which are required to be posted and also filed with the Interstate Commerce Commission, and if such an offense is committed knowingly the offender subjects himself to severe penalties."

This goes for naught, however, unless the carrier, through its shipping agent, willfully inserted the illegal charge in the bill of lading or shipping receipt.

The court also decided in this case that the doctrine under which an illegal contract may be enforced where the parties, though parties criminis, were in *pari delicto*, in order to protect the more innocent party, can only be invoked where it appears that a wise public policy would be advanced by allowing the more innocent party to succeed, and that such doctrine is not applicable here. The opinion states:

"Considering the evils which the Interstate Commerce Law was intended to remedy, would it, under the circumstances, be good policy to allow contracts made in violation of it to be enforced specifically? We think not. Prior to its enactment the complaint was almost universal that common carriers were discriminating in their rates in favor of favored shippers. To remedy this evil as to interstate shipments, Congress enacted the law, and it should be construed and enforced so as not in the least to thwart its purpose. Every shipper must be presumed to know of the existence of the schedules, and that they are open for his inspection, and also of the terms of the act rendering invalid every contract of affreightment not made in accordance therewith. Therefore, where a contract for an interstate shipment has been made and is sued on, or property rights are made dependent thereon, the shipper must be held to have contracted with reference to and in accordance with the rates fixed by the schedules regardless of the terms of his contract. In other words, the rates of interstate shipments are not the subject of contracts, but are in effect fixed under the law. To hold differently would be subversive of good policy, as it would tend to nullify the law."

The foregoing decisions are apparently to the effect that carriers of interstate commerce not only have the right, but that under the requirements of the statute it is their duty to collect freight charges according to rates specified in published tariffs irrespective of any contract, agreement, or offer made by the carrier at the point of shipment.

That the shipper is entitled to rely upon rates quoted by an agent of the carrier as the rates actually in force, and is not required to verify by personal inspection of rate sheets the statements of such agent, who is in duty bound to be correctly informed, may be conceded; but it is clear that this does not alter the legal duty of the carrier to charge,

demand, collect, or receive no more or less compensation than is expressed in the rate schedules in force over the road or line for the service rendered. Our rulings in the cases of Phelps (6 I. C. C. Rep., 36) and Duncan (6 I. C. C. Rep., 85) affirmed this duty of carriers, though notice was taken in the Duncan case of the tendency of the courts at that time to enforce shipping contracts providing for less than the tariff rate when entered into in good faith by innocent shippers. As above shown this tendency has been arrested and the question settled by the Supreme Court in the case of Hefley.

And yet innocent parties, shippers, or consignees ought not, by reason of statutory provisions, to be made to suffer injuries through carriers' mistakes. Especially is this so where shippers have been forced to rely upon rates quoted by agents, either because no tariff showing through rates to the destination point is in force, and the through charge is made by a combination of published rates to and from some intermediate point, as very frequently happens, or because the carriers' rate sheets are so intricate or unintelligible to the average shipper that he is unable to interpret them, as is the case with many freight tariffs on a large number of roads.

Whether, generally, a suit for damages, because of a shipment induced by a quoted rate less than was ultimately and properly collected, can be successfully maintained on other grounds than breach of the contract of shipment seems doubtful. Moreover, a consignee in Missouri can little afford to carry on litigation in California, or go to the expense of a suit in the Federal Court of any district. This class of shippers and consignees are, in most cases, led to suffer damage through enforced reliance upon the correct information and conduct of common carriers as represented by their authorized agents. Commercial transactions, large and small, are based upon rates stated by these agents to be in force, and it is not improbable that goods sold on the faith that such rates are lawful may be resold before delivery of the shipment and collection of charges raised according to standards specified in the tariffs. We have no hesitation in saying that the undercharge is productive of much greater evil than the overcharge, for, with the latter, the right of recovery is unquestioned. The ignorance or carelessness of agents in using less than the tariff rate in making shipping contracts has the same disastrous effect upon shippers as if the situation were deliberately brought about by the agents through deception or fraud.

The same public exigencies which made it necessary to require the publication of rates and observance thereof in order that transportation charges should be open—capable of being accurately ascertained and not varied for like service—demand that the carriers' responsibility for the collection of equal charges shall be extended to the insertion of only the lawful charge in the shipping receipt or bill of lading. As was stated in our last report in an article on this subject and that of overcharges: Patrons of railways should never find it necessary to bring suit for the recovery of damages growing out of the use by a carrier of rates not fixed according to law.

We desire to add now, in the light of these decisions, that the law regulating carriers and their charges should not be left in such a state that the carriers can find legal excuse for the damaging consequences of the ignorance or carelessness of their own agents in duties imposed upon such carriers by that statute.

The Marsden Company of Philadelphia, Pa., will build a large plant at Chenoa, Ill., for the manufacture of cattle feed from cornstalks.

In Ontario the yield of winter wheat is estimated by the Agricultural Department at 24,268,158 bushels, and of spring wheat 5,489,821 bushels. This is 10,000,000 bushels more wheat than last year.

Shippers who realize that good grades attract most attention, and are more readily disposed of at satisfactory prices than poor ones, are on the high way to success. The fact is, it will pay to give more attention to the cleaning of grain and seeds.

Manitoba wheat growers are troubled over a wheat pest that manifested itself in the harvest. A great many dead heads of grain were found, ranging from 5 to 20 per cent. in places. The trouble has not been located, but is supposed to be the work of an insect, which it is feared is alive and healthy, and ready to go to work next year.

The Moore Grain & Elevator Co. and the United Elevator Co. at Kansas City have for several months received complaints of short weights from their customers. At last they came to the conclusion they were being robbed, and engaged Capt. Jenkins, of the railroad police, to run down the thieves. He lived and slept for several days with the tramps and petty thieves in the freight yards until he discovered the ones engaged in "plugging" the cars. On the 11th two men were arrested, and at the same time a third party for receiving the stolen grain.

Court Decisions

Mortgage on Growing Wheat.

The Supreme Court in the action of the Bank of Woodland against B. F. Duncan, to replevin 450 sacks of wheat, has reversed the judgment of the lower court. In the season of 1892-93 the bank held two mortgages on a part of J. R. and B. F. Davisson's crop of growing wheat, to secure two promissory notes of \$4,500 and \$2,958.78, the mortgagors to care for, protect, harvest, sack and deliver the same to the mortgagee or his assigns. The bank obtained the notes and mortgages by assignment from Wolf Levy. When harvest time came the Davissons had B. F. Duncan, the owner of a header and thrasher, harvest the entire crop, for which service they became indebted to him in the sum of \$590. Davisson gave Duncan an order on Levy for that amount, but Levy refused to honor it, whereupon Davisson told Duncan to take sufficient wheat to secure his account, which he did, against the protests of the bank's agents. The bank sued to recover the wheat taken and lost the suit. The Supreme Court reversed the judgment, holding that the bank's claims should be first satisfied.

Rules Affecting Rates Must Accompany Schedule of Rates.

The Interstate Commerce Commission recently decided the case of Snffern, Hunt & Co. vs. the Ind. Dec. & W. Ry. Co., and Snffern, Hunt & Co. vs. the I. D. & W. Ry. Co. and the Cin. Ham. & Day. Ry. Co. for the complainant, and the I. D. & W. Ry. Co. was ordered to pay the complainant the full amount of its overcharges. In its decision the commission held that rules or regulations which in anywise change, affect or determine any part or the aggregate of a carrier's rates, fares or charges must be shown separately upon the carrier's posted schedules of rates, fares and charges; and any such rules or regulations promulgated by the carrier in circulars issued independently of its rate schedules are not lawfully in force.

Rules or regulations which, if enforced, would result in changing or affecting rates or charges shown on published schedules must be notified to the public for the time required by law for other rate changes. The notice should set forth the changes proposed to be made in the schedules then in effect, and such changes must be shown by printing new schedules or be plainly indicated upon the schedules in force at the time.

Circulars issued by a railway company prescribed maximum and minimum carload weights for grain depending upon the capacity of the car furnished by the railway company to the shipper; the rules so prescribed were not shown upon the carrier's posted schedules of rates and charges; and application of the rules to three carload shipments of corn carried for complainant resulted in materially increasing the charges above those in force under the carrier's published rate schedules. Held, That complainant only had to consult the schedule showing defendant's rates and charges, and that complainant is entitled to recover charges collected on its shipments in excess of those set forth in such schedule.

Under judicial interpretation of the statute, shippers and consignees cannot depend for the lawful rate or charge upon what may be quoted by the carrier's agent, but they must be guided by the published rate sheets themselves; and this emphasizes the duty of carriers to make their schedules of rates comply precisely with the mandatory provisions in the statute concerning the contents and publication of such schedules, so that shippers may readily and accurately determine therefrom what rates, and what transportation rules affecting rates, are actually in force for a particular service.

The fact that circulars containing rules concerning carload weights had been filed with the commission, and no opinion had been thereupon expressed by the commission as to the legality thereof, raises no presumption of approval by the commission of the rules or regulations therein set forth, or of the manner in which they were established.

A carrier which had not provided track scales at stations prescribed a rule or regulation forbidding shippers to load grain in cars beyond a specified weight above the marked capacity under a so-called "penalty" of increased rates on the excess weight. Held, That such rule or regulation, if properly established, is not unlawful, provided the increase in charges for excessive weight is not unreasonable, and the margin between such maximum and the carrier's minimum carload weight for grain is so wide that shippers may, without scales, readily comply with both rules.

A carrier enforced minimum carload weights for corn and other grain (except oats) which were 4,000 pounds less than the capacity of the car furnished by the carrier; the capacity of the car ordered by the shipper when such order could not be complied with, but this only on application to the superintendent, thus entailing more or less delay, and sometimes loss to shippers; the capacity of the car fur-

nished by the carrier on shipments destined to Indianapolis; and a general minimum weight of 28,000 pounds. Held, Upon all the facts, that minimum carload weights for corn or other grain which vary with the size of cars furnished by the carrier are unreasonable and unjust, and operate to subject complainant and other shippers to unjust discrimination and undue prejudice and disadvantage; and that the carrier should establish a fixed, reasonable and just minimum carload weight for corn and for each other kind of grain.

INDIANA GRAIN MERCHANTS WILL ORGANIZE.

It is generally admitted that the regular grain merchants of Indiana are greatly in need of an organization to reform the many abuses which now encumber the trade, and to protect those regularly engaged in the business from the encroachments of the man-with-a-scoop and other transient buyers, who pay no taxes, have no investment or regard for the rights of others and who delight in dishonest practices which bring the entire trade into disrepute. Therefore it is deemed advisable and in the best interests of the trade to organize an association of regular grain merchants.

If this movement in the interest of your business and the regular grain merchants of Indiana meets with your favor, kindly sign the declaration following and mail immediately to the "American Elevator and Grain Trade," 184 Dearborn street, Chicago.

The undersigned, being regularly engaged in the buying and selling of grain and the operation of a grain elevator in Indiana, does hereby declare in favor of the organization of an association to be known as the Indiana Grain Merchants' Association, the membership in which shall rest in firms or companies who operate grain elevators, and others regularly engaged in buying and selling grain whom the elevator men may desire to admit to membership.

The object of this association shall be the advancement and protection of the common interests of these regularly engaged in the grain business.

The first meeting for formal organization shall be held 1897, at, Ind.

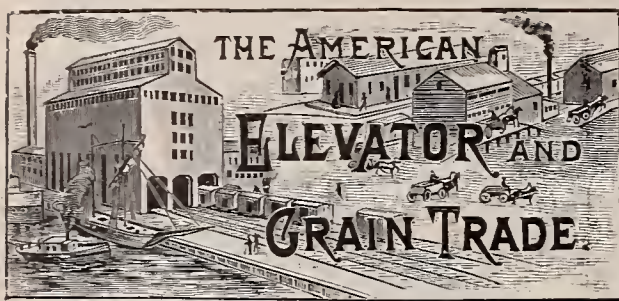
Signed

Indiana.

The following Indiana grain dealers have signed the foregoing declaration:

W. E. Hnrd, Logansport, Ind.
United Elevator Co., Kokomo (16 elevators).
G. L. McLane & Co., Union Mills.
McCray & Morrison, Kentland.
Jackway & Murray, Goodland.
C. M. Lemon, Bedford.
Taylor & Brown, Pendleton.
Brook Grain Co., Brook.
Betts & Unger, Forrest and Russiaville.
O. P. Taber & Co., Remington.
F. E. Lowry, Granger.
L. H. Swan & Son, Wadena.
C. A. Augspurger & Co., Berne.
A. B. Cobee & Co., Bringham.
Studabaker, Sale & Co., Bluffton.
A. J. Miller, Metamora.
S. W. Hale & Sons, Geneva.
H. C. Silver, Huntington.
Charles H. Lindner, Valparaiso.
A. E. Hartley, Goodland.
Geo. Bridenbucher, Cambridge City.
Greenville Grain Co., Greenville, Ohio.

Since the August number the Indiana grain dealers, who have signified their desire for organization by sending us their names, have voted for place and time of meeting as follows: Indianapolis received three votes, one giving November as time of meeting, one September 15, and one September. One voted for Logansport, giving October 26 as time of meeting. One named Rushville, at time when ordered. Ft. Wayne received one vote.



PUBLISHED BY THE FIFTEENTH OF EACH MONTH BY

MITCHELL BROS. COMPANY

(INCORPORATED.)

OFFICE:

Howland Block, 184 and 186 Dearborn St.,
CHICAGO, ILL.

A. J. MITCHELL.	-	-	-	Business Manager
HARLEY B. MITCHELL.	-	-	-	Editor.
CHARLES S. CLARK,	-	-	-	Assistant Editor

Subscription Price,	-	-	-	\$1.00 per Year.
English and Foreign Subscription,	-	-	-	1.50 " "

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., SEPTEMBER 15, 1897.

The advice is superfluous to most of our readers, we know, but it is just as well to expect a crop of bogus commission men and look out for them. They always flourish in times such as we have been experiencing.

Thefts of grain from cars have been so numerous in Kansas City that the Board of Trade has decided to make an investigation. In one case two men filled a wagon with rye from a car in broad daylight and were about to drive off when arrested.

There is always trouble over adjusting the loss on big elevators after a fire. Some of the Chicago elevators have taken our advice and had complete plans made, showing everything in the elevator. Some flour mills and other manufacturing establishments have done the same thing. It is a good scheme.

Milwaukee grain men, millers, brewers and others, are preparing to make the kick of their lives to the Interstate Commerce Commission on the discrimination practiced against that city by the railroads. They want some of the grain trade that they believe is naturally tributary to Milwaukee, and lay the blame for not getting it on the railway rates that causes the grain to seek Minneapolis, Duluth and Chicago in preference to Milwaukee.

The new rule of the Minnesota Railroad and Warehouse Commission went into effect September 1, regarding the keeping of records in country elevators. The rule obliges country houses to keep a record of grain on hand each week by grades, as well as a record of receipts and shipments and the amount of dockage taken. This is a fine thing from which to prepare a statement of the amount of grain in country houses; but the government has about as

much right to interfere in such a matter as it has to number the chickens in the hands of grocers every Saturday night.

We have been shown a specimen of wheat raised this season in Utah from seed found in a cave. It is a hard, white, dry wheat with good sized grains, though not large for Utah. It is said to be unlike any other wheat raised out there and certainly has no parallel further east. It is something like the wheat common in Sonora, Mexico, but not so plump.

The Illinois Grain Dealers' State Association will hold its next meeting at Peoria, Tuesday and Wednesday, October 19 and 20. Peoria receivers have appointed an entertainment committee and an effort will be made to make it an enjoyable as well as a successful business meeting. Some particulars are given in this number, but more of the program will be published in our next number. Every regular dealer of the state should be present.

The Department of the Interior at Ottawa, Canada, has received a bunch of wheat from a Dominion surveyor now in the Yukon country. It was cut September 7, 1896. It was fourteen inches high and not very well developed; that is pretty far north for wheat. Barley has been tried at Fort Yukon in small patches and has matured, though the straw was short. Oats and rye will also probably grow in some parts of Alaska. Kentucky blue grass grows as far north as Kotzebue Sound, and the blue joint grass grows four or five feet high.

The movement of grain from Kansas City to the Gulf is arousing enthusiasm in one quarter and exciting fears in another that the trans-Missouri grain trade is going to find a new route for itself. While St. Louis is properly making an effort to hold on to her grain trade and Kansas City will no doubt send a good deal of grain South, it will be found in a year or so that both have gained. There is a lot of country out West, just as there is Northwest. It was thought by some that Chicago's grain trade was to be hopelessly crippled by Duluth, Minneapolis and Superior; but Chicago is still in the grain business, as the records show.

THE BUFFALO ELEVATOR POOL.

It is once more announced that the Buffalo elevator pool is to go out of business at the end of the present season. This announcement is made periodically; the people have learned to expect it. But the pool has lived on, apparently out of spite or else to show how easy it is to defy public clamor and evade the law. This time the secretary says that the pool may even break before the close of the season. The reason given for the abandonment of the pool is the encroachments made in the business by the Ryan, Raymond and Export elevators and the building of the new Northern Elevator. If this be the case, Armour, J. J. Hill and Bartlett, Frazier & Co. have accomplished what the New York Legislature was powerless to perform. The vesselmen will canonize the men who broke the pool, if it is broken. We doubt that it is broken, principally because the members of the pool say it is.

PROPOSED MEETINGS OF DEALERS.

The Grain Dealers' Association of Kansas will meet at Topeka Tuesday and Wednesday, October 12 and 13.

The Illinois Grain Dealers' Association will meet at Peoria Tuesday and Wednesday, October 19 and 20.

The Indiana elevator men will meet at ——— on ——— to organize the Indiana Grain Merchants' Association.

LATEST PHASE OF THE GERMAN ANTI-OPTION LAW.

The latest developments of the working of the Anti-Option Law in Germany can hardly be gratifying to the friends of such legislation. As stated some months ago, there was immediate obedience rendered to the law by the speculators and dealers. All speculation and the quotation of prices based on speculation ceased. In the clubs and other resorts there was a sort of private speculation indulged in, one party selling privately to another over a glass of wine, and the purchaser reselling the grain, or rather the card containing the contract. Early in August the government stopped this also. Quotations wholly ceased, every actual transaction being private. Farmers were at a loss and at the mercy of the buyer. The Government has attempted to assist the farmer by publishing quotations of prices from London, Paris, Chicago and Budapest in the official gazette, which is hardly efficacious. Farmers complain that the dealers never made so much money as at present, while they are confused as to prices, can borrow no money at the banks on their grain and have to take what is offered them. So the Anti-Option Law, which has absolutely killed grain speculation in Germany, has hardly been a boon to the farmer.

SHIFTING OF COUNTRY GRAIN MARKETS.

The merchants and local papers of Ottawa, Ill., are asking what is the matter with the town as a grain market. Years ago Ottawa was probably the largest primary grain market in the world in the amount of grain received direct from farmers' wagons. A dozen elevators lined the sides of the canal and hydraulic basin. Located less than a hundred miles from Chicago, and having both canal and railway transportation, it seemed that years would only add importance to her position as a farmers' market. But gradually the grain has gone elsewhere. The elevators have disappeared until only three or four are left. And although another railway has been built to Chicago, smaller towns on each side of Ottawa, with fewer facilities for transportation and with no advantages as trading points, have taken the grain trade away. What is the trouble? Is it railroad discrimination? Is it higher prices paid for grain at the other towns?

A great many of the older towns make the same complaint as Ottawa. They find younger rivals disputing their old-time prestige, and in some cases taking it away together. Perhaps railroad discrimination is a factor in some cases, especially when competing towns are on different lines. But railroad discrimination will

hardly stand a crusade by a town thoroughly in earnest, especially when there are two roads and a canal to regulate each other and a railway commission to supervise the roads. The margin of profit in handling grain is not sufficient to permit of any considerable inducement in the way of higher prices being held out by one station over a neighboring station unless the grain dealer is a favored customer of the road. But in the case of Ottawa, according to the local papers, all the neighboring stations on both railroads seem to be getting the business; and if discrimination is practiced it is of a kind so rank that it ought to be corrected without any difficulty:

Now, without attempting to diagnose this particular case, where several elements may contribute to the decadence of the town as a grain market, we may note a fact that often escapes observation. This is that farmers manifest an increasing tendency to take their grain to the nearest market. Prices are practically made for the grain dealer and inducements in that direction can be offered only by surrendering a portion of the small profit which modern methods have left to the dealer. So the farmer, things being equal in the markets around him, takes his grain to the nearest station because he can haul two or three loads a day, when if he went to the older station he could perhaps haul only one. Grain is cash and the farmer does not require trade facilities when he sells his grain. In fact, he usually continues to buy goods in the older and larger town long after he has discontinued hauling his grain there. It is just as well to keep an eye on the railroads and see that they are not indulging in discrimination against a town; but the dividing up of a grain trade that once amounted to a large aggregate, among several small towns, is doubtless due largely to the one apparently insignificant cause we have mentioned.

SHORTAGES AT KANSAS CITY.

Shortages in shipments of grain to Kansas City have prompted the members of the Kansas Grain Dealers' Association to protest again against what they consider the steals of the Kansas City elevators. Before any explicit charges are made it would be advisable to have the scales at shipping elevator as well as at the terminal elevator carefully tested by a scale expert. It is a difficult matter to keep scales in working order and casual examination by an inexperienced scale man when the hopper is empty is not likely to result in the discovery of all defects or faults.

However, shortages are not always due to defective scales and dishonest terminal elevator men. Carelessness on the part of shipper in weighing and in cooping cars, carelessness on the part of the carriers in permitting grain-laden cars to be broken open and grain stolen, and carelessness on the part of terminal weighmen in weighing and recording weights are responsible for many of the shortages.

Investigation at Kansas City has shown that the dishonesty of the terminal elevator men was responsible for many of the shortages in shipments to that city, and the Kansas shippers have good reasons for believing that it is still a potent factor in causing their losses. The Kansas City Board of Trade has, by the appointment of a Committee on Weights, shown

a determination to stop the stealing and make that market an attractive one for country shippers. If the committee fails in its work, its appointment will not have the desired effect and shippers will seek other markets for their grain.

The Kansas dealers are taking the right course to get honest weights and payment for all grain they load into cars, and if they persist in the work will succeed in greatly reducing the average shortage at terminal, just as the Illinois Association has done. The Association is already strong in number of members, but it fully merits the support of at least 500 more regular Kansas dealers.

THE WORLD'S GRAIN SHORTAGE.

For a month interest has been centered on extent of the deficiency of the cereal crops of this year. Estimates vary widely. For instance, one authority confidently states that Europe will need 384,000,000 bushels of wheat, while another cuts this amount in two. But all are agreed that 1897 is a short year in the world's crops. The Hungarian Minister of Agriculture, whose estimates are regarded as conservative and close, places the deficit of wheat at about 135,000,000 bushels; of rye at 190,000,000 bushels; of barley at 108,000,000 bushels; of oats at 165,000,000 bushels, and of corn at 167,000,000 bushels. This makes a shortage in these five cereals of 765,000,000 bushels. The Mark Lane Express, in its issue of September 6, gives the world's shortage of wheat at 112,000,000 bushels.

To the uninitiated this might look like famine, especially when it is added that potatoes are largely a failure in Europe. But there are factors on the other side of the account. There is practically no means of knowing the amount of the invisible supply of old grain in Russia and America, and it must be remembered that everywhere more or less grain is carried over from preceding crops. Price also has a very direct relation to consumption. Further, there is a tendency to underestimate short crops. All these factors must be taken into account, and even then guessing at future prices is hazardous business.

RATS.

We would all be surprised if we could see what it costs this country annually to feed the rats. So long as the rodent confines himself to living on the refuse of the alley, his keep is an insignificant item; but when he goes into the granaries, cribs and mills, he becomes a very costly nuisance to the parties who are unwillingly taxed with his support. And the rat seems more in evidence this year than usual. We have received a number of letters from millers and elevator men on the subject. Down in McLean County, Ill., the rats attacked the stalks of corn in the field and cleaned the green ears of every grain. We publish in this issue the inquiry of a large elevator firm that wants to go at the matter systematically, as to the best method of exterminating the pestiferous rat.

We wish it were possible to secure a descendant of the Pied Piper Hamelin to lead the rats to their destruction. But unfortunately, the descendants of that musical gentleman appear to be scarce. The next best remedy we know of is the ferret. He has been tried with

success in flour mills. The mongoose was imported into Jamaica to kill the rats. He killed them; likewise all the poultry, birds and pretty much everything else that he could handle. So the ferret seems the only hope. But perhaps some of our readers can suggest at least partial means of killing off the rats and keeping their numbers down. We are sure that any suggestions would be received by a large number of readers with gratitude. If you know of anything that rats don't like, tell your fellow grain dealers through our columns.

NATIONAL ORGANIZATION.

Unfortunately for the trade the Grain Dealers' National Association has not received the hearty support that it is entitled to, and there seems to be a disposition on the part of a few benighted persons to decry its efforts to advance interests that are common to all grain dealers of the country. Prejudice, pique and lack of ability to perceive the scope of the Association and its opportunities to promote and protect the interests of dealers in national affairs, has resulted in unfair criticism.

The grain trade is one of the most important businesses of the land and any reasonable dealer who will give ten minutes' earnest thought to the subject will maintain that it is folly for the trade to struggle along in the old rut without making a combined effort to obtain relief from the old burdens and to reform national customs or practices which work to the detriment of all dealers. The National was not organized to look after the interests that are common to a district or state, and in no way interferes with the work of state or local associations.

On the other hand, the work which properly falls to the National cannot be taken up by the local or state associations. Although their members may be directly interested in the needed reform, it is unreasonable to expect them to bear the entire burden of securing it. The dealers of other states, other districts, are equally interested and should be given an opportunity to share in the burden.

As there are but two or three strong local associations it is not practicable to organize a National Association on the delegate plan, as it would leave many districts without representation and deny many workers the privilege of contributing to the support of an organization. It would be far better for the National Association membership to be made up of firms, and the other organizations could affiliate with it for the purpose of helping to advance work of national importance. The affiliated associations would be given representation and be expected to contribute to the expenses of the National. It would be a mongrel plan of organization, still it would permit and encourage many to help support a national organization. Something must be done to strengthen the National Association and to give it more funds to work with.

The example of New Orleans and Galveston has stimulated Charleston and the South Carolina & Georgia road is making an effort to get Western grain. The elevators have been put in shape to handle the expected traffic.

EDITORIAL MENTION

Indiana elevator men are unnecessarily slow in declaring in favor of organizing a state association.

Cattle feeding is sure to receive a great stimulus this winter unless corn goes a great deal higher than is anticipated.

Oklahoma grain dealers are organizing to protect their business from the scoop-shovel men and transient buyers.

One of the peculiarities of the grain market the present season is the fact that for the first time in years spot wheat the world over commands a premium over futures.

Boston is complaining of the grain car famine in the West, yet the railroads have done remarkably well considering the unprecedented movement of grain to the seaboard.

The Minnesota Railroad and Warehouse Commission has, out of deference to the shriveled wheat of the present crop, reduced the weight required for No. 2 and No. 3 one pound, which may make some farmers happy.

Rats are feasting on much of the corn that is held in cribs, and anyone who will tell of a sure remedy for ridding the cribs of these pests will be blessed by many elevator men. We will gladly give room to any suggestions.

The Kansas City, Pittsburg & Gulf R. R. may not prove the revolutionary factor in the export grain trade that its promoters say it will be; but it bids fair to be a very efficient regulator of rates to the seaboard for South-western people.

The boom in wheat brought out some pretty old wheat. A sample was shown by a Kansas City Board of Trade firm that was eleven years old. The owner of it had the crops of the last twelve years and has only commenced selling his wheat off.

Superior expects to handle a large amount of corn from now on in the Globe and Belt Line Elevators. This has been rendered possible by an adjustment of rates on the Omaha road which will divert some of the corn hitherto carried to Chicago to the head of the lakes.

A Seattle judge has decided that where neither consignor nor consignee desire inspection the Washington Grain Inspection Department cannot force its service upon them, and especially where both are one and the same firm. The case has been appealed to the state Supreme Court.

Use of public weights should be made compulsory in all terminal markets at every elevator or grain receiving warehouse. It matters not whether the department is controlled by the state or a board of trade. Weighing by disinterested parties assures the country shipper of fair treatment and places the terminal ele-

vator man above suspicion. Public weights will make any market more attractive to shippers and buyers.

Col. Rogers, Secretary of the Minneapolis Chamber of Commerce, estimates the wheat yield of Minnesota and the Dakotas at 149,500,000 bushels, or about 20,000,000 bushels more than last year. And he offered to bet \$500 that he was right. Will the Colonel tell an anxious public how he would set about proving crop figures?

No. 2 Spring wheat may be deliverable on contracts on the Chicago Board of Trade again. The directors have decided to submit an amendment to the rules to a vote of the members. If it is carried it will go into effect January 1, 1898, and henceforth No. 1 Red Winter, No. 2 Red Winter, No. 1 Northern Spring or No. 2 Spring wheat will be deliverable on contracts for future delivery.

Don't make the common mistake of over-looking price as an element in adjusting the relation of supply and demand. The daily papers particularly, say that the world must have wheat at any price, overlooking the fact that those who haven't the price don't get the wheat. And those who can buy will buy less at a high price. This is not a bear argument, but plain, common sense. Prices may be high, but there is a limit in price at which things will be bought in large amounts.

The Kansas Grain Dealers' Association, which now has a membership of 185, will hold its next meeting at Topeka, October 12 and 13. The Association is doing some very effective work in the interest of the regular grain dealers of the state. It is the most successful organization the trade has ever had in the state and surely merits the support of every regular dealer. They should attend the meetings, get acquainted with their brother dealers and join heartily in the work. They will profit in many ways by so doing.

The bucket shops have been driven into bankruptcy by the recent rise in the markets, and a long line of gullible creditors are very angry because they cannot collect their winnings. In San Francisco every one of them failed, and in New York, Chicago and other cities there were many failures. The would-be speculators are not capable of learning that bucket-shop keepers will not pay losses when the market is going against them. Suspension is an easy way to wipe out their liabilities, and reorganization under a new name soon brings the same old band of suckers to their blackboard.

C. Wood Davis, the Kansas statistician, is again in evidence. His contention all along has been that the bread-consuming population of the world was increasing faster than the area devoted to cereal crops, and hence the world would sooner or later find itself confronted with a shortage that would be a more serious matter than such things are usually figured, as it would be more or less permanent in character, and not wiped out by one good crop. Mr. Davis was mistaken as to the year when this shortage should materialize, placing it, if we remember rightly, in 1895. If high prices continue next

year we will overlook this discrepancy in dates and apologize to Mr. Davis for anything we may have said derogatory to his reputation as a prophet.

The Board of Directors of the Milwaukee Chamber of Commerce have adopted amendments to Rule XIX governing the grading of wheat, and Rule XI governing contract grades of wheat. We will publish the rules governing the grading of grain in the Milwaukee market in the October number of this journal.

A decision has just been rendered in the district court at Duluth which rejoices the hearts of vesselmen and makes the loading elevator responsible for shortages in grain cargoes. The owners of the steamer Frontenac sued the Eastern Minnesota Railway to recover the value of a shortage of 1,502 bushels in one cargo of wheat. The defense was that the grain was weighed by the Minnesota State Inspection Department and that therefore the state was liable. The judge thought otherwise and held that the elevator was responsible.

The fire wardens in Cleveland, Ohio, have been investigating the elevators of that city and found them, or some of them, full of dust. In some places the dust was from one to two inches deep. They gave the owners orders to clean up. One firm was found that kept men sweeping constantly and its premises were in good order. The interest of the fire wardens was aroused by the explosion of dust in the Northwestern Elevator in Chicago. It is possible the fire wardens may overestimate the dangers of dust per se, but any dirty or dusty establishment is a more hazardous risk than is a clean one; and besides it is possible that the dusty one will explode in the course of the fire.

Elevator men in the Northwest have had a world of trouble with assessors in the matter of taxes. Last spring at Grand Forks, N. Dak., the assessor called on the superintendent of the St. Anthony & Dakota Elevator Co., whose headquarters is Grand Forks, for a list of the property owned by the company in the state. The superintendent gave the required information, with values, including the amount of grain in each elevator. The assessor then returned the whole list as taxable in Grand Forks. The company refused to pay taxes on property located outside of the county to the Grand Forks collector and appealed to the court. The court held that the company was right and the assessor wrong.

One of the sublimest exhibitions of nerve that has ever been chronicled is the case of a certain speculator who went to the state department at Washington a couple of weeks ago. He requested a minor official to send cable dispatches to U. S. consuls in different grain raising and consuming countries for a report on wheat, stocks, etc. He tendered money for the cable tolls both ways. It is not uncommon for merchants to use the consular service this way, and the minor official took the money and would have sent the dispatches had not another official scented a speculation in the proceeding. The money was returned and the dispatches destroyed. That was a nervy game to get the government to further a private speculation.

The Secretary of State has decided that hereafter the department will collect no information for individuals that can be possibly used in speculation.

Unless all accounts are overdrawn, Ireland will have a hard time of it from now until the next crop. Continuous rain and cold weather ruined the oats, and the potato crop is next to a failure. To add to the distress, American flour and corn meal are no longer cheap, and many look for a repetition of the famine of fifty years ago.

Regular grain buyers who find their profits absorbed by lending grain bags to farmers should confer with the other buyers of their district and agree on a discontinuance of the unnecessary practice. It is not appreciated by the farmers, nor does it bring any profit to the buyer; in fact, the farmer often uses the bags of one dealer to take his grain to another. A relic of a day of large profits, the practice was long ago out of date and should have been abolished years ago. Competition and lack of organization are responsible for its continuance.

The Kansas Grain Dealers' Association is after the scoop-shovel men and the receivers who send bids to such buyers or to farmers. It has denounced to the trade two Southwestern firms who persist in sending bids to persons not regularly engaged in the grain business, and all regular country dealers, out of consideration for their own business, will refuse to ship any grain to such receivers. If the receivers expect any business from the regular country shippers they must treat them with some consideration and not attempt to undermine their business by ignoring the regular country shippers' rights and dealing direct with the farmer. No regular shipper in his right mind would ship to such a receiver, and it is decidedly unreasonable for him to expect it. If the regular dealers did not join hands and demand this protection they would soon be starved out of the business.

An unregenerate exchange says the wheat market is showing a disposition to settle down, and the speculators to settle up.

Nebraska's crop of wheat is not only large in quantity, probably from 40,000,000 to 45,000,000 bushels, but is grading higher than usual.

The thieves that were arrested for stealing wheat from cars on East Side Elevator tracks have been indicted, and will be tried, and, no doubt, condemned.—Toledo Market Report.

All manufacturers who are readers of "American Elevator and Grain Trade" are requested to mail one of their more recent catalogues to the American Catalogue Bureau, Cleveland, Ohio. It is the intention of this bureau to open free business libraries in several of the more important cities of this country and abroad, and by complying with the above request our readers will not only benefit themselves, but assist in imparting some valuable information.

The Nurdyke & Marmon Company, Indianapolis, Ind., reports: "Our business has been quite brisk in the last three months and is steadily increasing, especially in our French burr feed mill department. The demand for French burr feed mills is steadily increasing and now that the farmers have reaped a rich harvest they will no doubt feel like investing in apparatus of this kind. We think the outlook is bright and that we will do a good business. We have already increased our force more than double and are working full time."

Trade Notes

The man who snares the dollars.
Catches more than e'en the miser.
Is the one who never falters.
But's a persistent advertiser.

Seeley, Son & Co., elevator builders of Fremont, Neb., in sending us notes of some of their recent contracts, say that the outlook is good and that "confidence is restored," judging from the indications of their business.

Charter Gas Engine Co., Sterling, Ill., writes us that it was never busier than at the present time, and were it not for the fact that it doubled its capacity last year it would be completely snowed under.

The style of the Kansas City Metal Roofing and Corrugating Company, Kansas City, Mo., has been changed to the Kansas City Roofing and Corrugating Company, as more properly describing its business, which embraces rust proof paint, rubberoid prepared roofing, building paper, etc., as well as metal roofing, etc.

The Commercial Travelers' Fair will be held Feb. 28 to March 5, 1898, at Madison Square Garden, New York. Its object is to raise funds for completing the partially erected building which crowns the South Mountain at Binghamton, N. Y., intended as a home for disabled commercial travelers, their indigent wives and children, or their widows and orphans.

Chas. Kaestner & Co. report very large sales of the Kaestner-Morgan Improved Oat Clipper. The new machine recommends itself to elevator men by a number of new features. It is claimed that it saves all pin oats, and all oat clippers know what this means. New machines have been recently placed in a number of Chicago elevators and orders from outside the city have been large.

A Minnesota man has invented an elevator-conveyor for unloading grain from wagons into cars. It is run by horse power and consists of a large spout about 14 feet in length, inclosing a belt carrying buckets. The wagon is driven close to the machine and the grain may be chuted into it. A number of these contrivances have been put in operation in Minnesota to test their practical value.

The S. Howes Co., Silver Creek, N. Y., write us under date of September 10: "We would say that business is very good with us, so far as sales are concerned. August was the largest month this concern has known in a number of years, and the way September has started out indicates that it will be better than August. We have been running our factory up to nine o'clock the last six weeks."

D. D. Bowsher, secretary and treasurer of the N. P. Bowsher Company, South Bend, Ind., reports: "The outlook for feed mill trade is better than it has been at this time within three years and the early inquiries and orders are more numerous. We are making preparations to supply a good trade. Our plant is well equipped, but we are making such little additions and changes in our machinery as keep us up to date."

The Garry Iron & Steel Roofing Company, Cleveland, O., says: "There has been no change in our house; but we can see an improvement in business. There is a decidedly better feeling, and though it is not improving very rapidly, the tone is healthier and we feel encouraged. We hope with the increase in price of wheat and the anticipated improvement in other farm products we will get a good trade, at least by another year."

Mr. J. J. Blackman, who is now associated with L. E. Bunker in the commission business at 274 Washington Street, New York, will soon round out a third of a century in the business. On September 1 he celebrates the commencement of the thirty-fourth year of his connection with the business of handling flour, grain, hay, mill feed, seeds, etc., on commission in the New York market. Mr. Blackman's card has been continuously before the readers of this paper for many years, and no man in that mar-

ket is better known to the milling and grain trades. Mr. Blackman confines himself strictly to a commission business.

Late Patents

Issued on Aug. 10, 1897.

Corn Sheller.—John Q. Adams, Marseilles, Ill. No. 587,906. Serial No. 609,302. Filed Oct. 19, 1896. See cut.

Elevator Bucket.—Albert W. Brash, Newark, S. D. No. 587,697. Serial No. 324,342. Filed Feb. 20, 1897.

Igniter for Explosive Engines.—Philip Mueller, Decatur, Ill. No. 587,747. Serial No. 616,133. Filed Dec. 18, 1896.

Gas Engine.—Henry C. Hart, Detroit, Mich., assignor to the Henry C. Hart Manufacturing Company, same place. No. 588,061. Serial No. 511,532. Filed May 17, 1894.

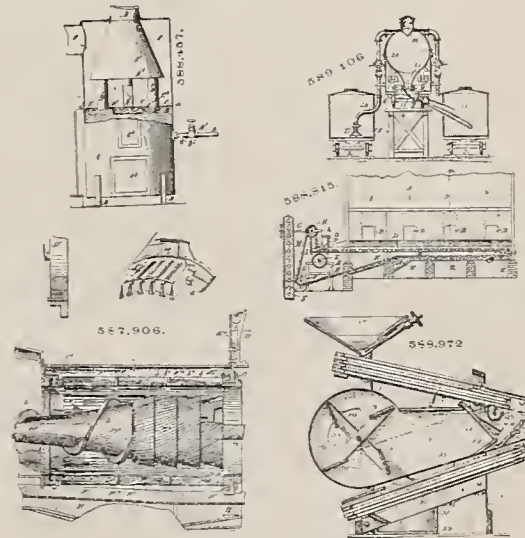
Gas Engine.—Henry C. Hart, Detroit, Mich., assignor to the Henry C. Hart Manufacturing Company, same place. No. 588,062. Serial No. 617,295. Filed Dec. 28, 1896.

Hay Press.—John C. Couch, Brownwood, Texas. No. 587,709. Serial No. 601,728. Filed Aug. 5, 1896.

Issued on Aug. 17, 1897.

Combustion Engine.—Augustus G. Pace, New York, N. Y. No. 588,466. Serial No. 623,067. Filed Feb. 12, 1897.

Apparatus for Separating Dust From Air.—Jeremiah E. Mathewson, Sheffield, England, assignor to Benjamin C. Tilghman and Richard A. Tilghman, Philadelphia, Pa. No. 588,457. Serial No. 615,661. Filed Dec. 14, 1896. See cut.



Heat Engine.—Sidney A. Reeve, Worcester, Mass., assignor to Charles F. Brown, trustee, Reading, Mass. No. 588,293. Serial No. 621,389. Filed Feb. 1, 1897.

Issued on Aug. 24, 1897.

Automatic Feed Spout for Conveyors.—James M. Dodge, Philadelphia, Pa., assignor to the Link Belt Engineering Company, same place. No. 588,899. Serial No. 624,413. Filed March 26, 1897.

Chute for Feeding Conveyors.—James M. Dodge, Philadelphia, Pa., assignor to the Link Belt Engineering Company, same place. No. 588,900. Serial No. 639,195. Filed June 3, 1897.

Igniter for Explosive Engines.—Leon Bly, Decatur, Ill., assignor of one-third to Elbert E. Johnson, same place. No. 588,629. Serial No. 617,078. Filed Dec. 26, 1896.

Igniter for Gas Engines.—Charles White and Arthur R. Middleton, Baltimore, Md. No. 588,917. Serial No. 545,286. Filed April 11, 1895.

Gas Engine.—Charles Quast, Marion, Ohio. No. 588,876. Serial No. 522,180. Filed Sept. 5, 1894.

Grain Feeder and Conveyor.—Boston S. Constant, Bloomington, Ill. No. 588,815. Serial No. 603,170. Filed Aug. 19, 1896. See cut.

Issued on Aug. 31, 1897.

Baling Press.—Herrman Albrecht and John R. Bitner, Cleveland, Ohio, assignor to the Johnston & Jennings Company, same place. No. 588,938. Serial No. 579,981. Filed Feb. 19, 1896.

Fanning Mill.—William F. Frambach, Cherokee, Iowa. No. 588,972. Serial No. 621,339. Filed Jan. 30, 1897. See cut.

Gas Engine.—John C. Wilson, Allegheny, Pa. No. 589,150. Serial No. 605,545. Filed Sept. 11, 1896.

Gas Engine Governor.—Robert Caldwell, Auckland, New Zealand. No. 589,335. Serial No. 610,566. Filed Oct. 30, 1896.

Grain Transfer Apparatus.—Frederick J. Weber, Connorsville, Ind., assignor to the Steel Storage and Elevator Construction Company, same place. No. 589,106. Serial No. 625,614. Filed March 1, 1897. See cut.

RANGE OF PRICES AT CHICAGO.

The daily range of prices for cash grain at Chicago since August 15 has been as follows:

August.	No. 2 R.W. WHT.		No. 2 S.P. WHT.		No. 2 CORN.		No. 2 OATS.		No. 2 RYE.		No. 3+ BARLEY		No. 1 FLAXSEED	
	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
Sept.														
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														

*Holiday. +Free on board or switched.

During the week ending August 21 Prime Contract Timothy sold at \$2.67½@2.77½ per cental; Prime Contract Clover Seed at \$6.50@6.85, Hungarian at \$0.40@0.60, German Millet at \$0.40@0.70, buckwheat at \$0.60@0.85 per 100 pounds.

During the week ending August 28 Prime Contract Timothy sold at \$2.70@2.95 per cental; Prime Contract Clover Seed at \$6.25@7.10; Hungarian at \$0.40@0.60, German Millet at \$0.40@0.70, buckwheat at \$0.60@0.85 per 100 pounds.

During the week ending September 4, Prime Contract Timothy sold at \$2.50@2.90 per cental, Prime Contract Clover Seed at \$5.75@7.15, Hungarian at \$0.40@0.60, German millet at \$0.40@0.70, buckwheat at \$0.60@0.85 per 100 pounds.

During the week ending September 11 Prime Contract Timothy sold at \$2.60@2.80 per cental, Prime Contract Clover Seed at \$5.60@6.60, Hungarian at \$0.45@0.60, German millet at \$0.40@0.70, buckwheat at \$0.60@0.80 per 100 pounds.

RECEIPTS AND SHIPMENTS AT TOLEDO.

The receipts and shipments of grain and hay at Toledo, Ohio, during the month of August, 1897, as compared with the same period of the preceding year, were, according to Denison B. Smith, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	3,718,442	1,132,822	3,479,945	536,000
Corn, bushels.....	1,165,366	278,700	827,650	66,000
Oats, bushels.....	875,729	132,540	27,500	4,100
Barley, bushels.....				
Rye, bushels.....	256,184	55,419	153,000	115,000
Clover Seed, bags.....				
Flour, barrels.....	5,636	6,260	128,669	184,781

RECEIPTS AND SHIPMENTS AT NEW ORLEANS.

The receipts and shipments of grain, etc., at New Orleans, La., during the month of August, as compared with the same period of the preceding year, were, according to Hy. H. Smith, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	1,364,853	329,780	1,244,856	268,293
Corn, bushels.....	1,766,293	2,002,644	896,203	1,397,057
Oats, bushels.....	26,668	115,932	16,668	20,415
Rough Rice, sacks.....	63,822	77,805	60,761	45,655
Clean Rice, barrels.....		404	14,654	10,677
Flour, barrels.....				

Following is Secretary Smith's report of the stocks of rough rice and clean rice at New Orleans on August 1 and September 1: Rough rice in sacks—total stock August 1, 25,966, against 83,223 Aug. 1, 1896; total stock September 1, 29,027, against 115,373 on Sept. 1, 1896. Clean rice in barrels—total stock No. 1, August 1, 3,675, against 5,256 Aug. 1, 1896. Total stock No. 1 September 1, 4,845, against 5,942 Sept. 1, 1896. Total stock No. 2, August 1, 463, against 916 Aug. 1, 1896. Total stock No. 2, September 1, 1,112, against 1,029 Sept. 1, 1896.

RECEIPTS AND SHIPMENTS AT PEORIA.

The receipts and shipments of grain and hay at Peoria, Ill., during the month of August, as compared with the same period of the preceding year, were, according to R. C. Grier, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	49,800	276,200	10,200	188,400
Corn, bushels.....	1,736,850	1,038,800	1,044,500	341,800
Oats, bushels.....	1,425,950	1,634,250	1,146,950	1,122,650
Barley, bushels.....	11,900	20,200	19,600	11,900
Rye, bushels.....	9,000	12,600	1,800	3,000
Mill Feed, tons.....				
Seeds, pounds.....	390,000	219,000	330,000	229,250
Broom Corn, pounds.....	60,000	30,000	105,400	60,000
Hay, tons.....	1,090	970	149	340
Flour, barrels.....	22,650	61,060	21,900	47,550
Spirits and Lignors, bbls.				
Syrup and Glucose, bbls.				

RECEIPTS AND SHIPMENTS AT SAN FRANCISCO.

The receipts and shipments of grain and hay at San Francisco, Cal., during the month of August, as compared with the same period of the preceding year, were, according to T. C. Friedlander, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, centals.....	870,149	1,140,967	689,026	866,589
Corn, ".....	170,486	16,326	2,292	1,293
Oats, ".....	46,705	36,660	4,014	1,643
Barley, ".....	1,156,305	1,025,783	800,352	611,339
Rye, ".....	3,460	3,828		28
Flaxseed, sacks.....	2,860	2,963		
Hay, tons.....	19,611	20,947	1,340	332
Flour, barrels.....	147,000	89,750	73,893	118,007

RECEIPTS AND SHIPMENTS AT DULUTH.

The receipts and shipments of grain and hay at Duluth, Minn., during the month of August, as compared with the same period of the preceding year, were, according to Frank E. Wyman, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	1,949,853	5,294,627	2,028,676	5,645,087
Corn, bushels.....	277,142	68,045	150,896	58,587
Oats, bushels.....	513,101	625,070	644,966	686,991
Barley, bushels.....	182,048	312,032	184,938	264,586
Rye, bushels.....	182,516	149,672	181,218	146,159
Grass seed, pounds.....				
Flaxseed, bushels.....	235,503	149,752	426,925	522,957
Flour, barrels.....	498,015	700,455	641,530	1,077,775
Flour production Duluth and Superior.....	174,725	404,520		

RECEIPTS AND SHIPMENTS AT KANSAS CITY.

The receipts and shipments of grain and hay at Kansas City, Mo., during the month of August, as compared with the same period of the preceding year, were, according to E. D. Bigelow, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, cars.....	6,485,400	1,274,400	5,250,965	
Corn, cars.....	864,600	1,248,000	601,178	
Oats, cars.....	236,000	499,000	117,000	
Barley, cars.....	2,000	4,800	2,000	
Rye, cars.....	30,000	225,500	22,250	
Flaxseed, cars.....	78,500	11,390	78,500	
Hay, cars.....	10,360		2,630	
Flour, cars.....				
Bran, cars.....				

RECEIPTS AND SHIPMENTS AT ST. LOUIS.

The receipts and shipments of grain and hay at St. Louis, Mo., during the month of August, as compared with the same period of the preceding year, were, according to George H. Morgan, secretary of the Merchants' Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	2,614,858	3,036,236	715,322	626,931
Corn, bushels.....	2,036,296	4,028,020	1,508,526	3,564,296
Oats, bushels.....	1,201,684	1,021,052	281,536	258,987
Barley, bushels.....	6,242	2,250	2,700	2,472
Rye, bushels.....	65,762	26,044	58,243	6,696
Hay, tons.....	19,895	21,214	5,785	7,613
Flour, barrels.....	118,930	127,511	166,823	184,648

RECEIPTS AND SHIPMENTS AT MILWAUKEE.

The receipts and shipments of grain and hay at Milwaukee, Wis., during the month of August, as compared with the same period of the preceding year, were, according to Wm. J. Langson, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	848,622	1,327,900	84,650	153,150
Corn, bushels.....	670,150	130,450	288,350	5,200
Oats, bushels.....	875,000	2,093,600	923,987	1,548,635
Barley, bushels.....	695,200	592,800	193,384	66,200
Rye, bushels.....	220,630	140,400	88,400	267,800
Grass seed, pounds.....	140,760	37,547	58,370	76,380
Flaxseed, bushels.....	14,335	50,120	7,110	30,680
Hay, tons.....	1,480	1,175	19	19
Flour, barrels.....	107,550	192,700	225,874	329,471

RECEIPTS AND SHIPMENTS AT BUFFALO.

The receipts and shipments of grain and hay at Buffalo, N. Y., during the month of August, as compared with the same period of the preceding year, were, according to Wm. Thurstone, secretary of the Merchants' Exchange, as follows:

Articles.	Receipts by Lake.		Shipments by Canal.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	7,501,385	6,077,372	670,519	2,283,817
Corn, bushels.....	2,811,902	7,905,901	2,381,230	604,546
Oats, bushels.....	6,669,165	5,094,518	250,588	1,065,645
Barley, bushels.....	579,000	465,500	156,708	136,991
Rye, bushels.....	984,736	625,810	87,333	597,174
Grass seed, lbs.....	41,052	55,501		
Flaxseed, bushels.....	513,550	1,335,653	*10,435,442	*55,614,732
Hay, tons.....				
Flour, barrels.....	1,350,621	1,361,108	2,142	25,836

* Pounds.

RECEIPTS AND SHIPMENTS AT MINNEAPOLIS.

The receipts and shipments of grain and hay at Minneapolis, Minn., during the month of August, as compared with the same period of the preceding year, were, according to G. D. Rogers, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	3,321,390	3,077,480	1,231,230	847,150
Corn, bushels.....	139,740	77,040	4,020	2,260
Oats, bushels.....	739,620	641,140	207,820	569,480
Barley, bushels.....	108,510	41,420	75,430	6,120
Rye, bushels.....	62,080	75,820	64,650	98,170
Grass Seed, pounds.....				
Flaxseed, bushels.....	63,510	47,600	37,520	26,630
Hay, tons.....	2,199	2,071	120	
Flour, barrels.....	8,496	4,662	1,146,689	1,135,444

RECEIPTS AND SHIPMENTS AT CHICAGO.

The following table, compiled by George F. Stone, secretary of the Board of Trade, shows the receipts and shipments at Chicago during August, 1897 and 1896, of seeds, hay and broom corn:

Receipts.	Timothy lbs.	Clover lbs.	Other Grass Seeds, lbs.	Flax-seed, bu.	Broom Corn, lbs.	Hay, tons.
1897.....	14,469,190	133,455	115,055	695,586	309,000	19,110
1896.....	8,309,435	314,682	235,765	1,647,158	682,405	17,582
Shipments						
1897.....	7,228,933	118,884	1,698,021	227,960	742,334	845
1896.....	6,585,463	175,204	1,218,339	1,050,320	492,332	2,492

WHEAT RECEIPTS AT PRIMARY MARKETS.

The wheat receipts at nine primary markets during the ten weeks ending September 6, for the last three years, according to the Cincinnati Price Current were as follows:

	1897-98.	1896-97.	1895-96.
St. Louis.....	4,160,000	5,878,000	4,521,000
Toledo.....	5,146,000	2,621,000	2,838,000
Detroit.....	1,491,000	892,000	808,000
Kansas City.....	10,428,000	2,232,000	1,531,000
Cincinnati.....	249,000	329,000	249

INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector E. J. Noble, the grain received at Chicago during August, 1897, was graded as follows:

Railroad.	WINTER WHEAT.									
	White.			Hard.			Red.			No G'de.
	2	3	4	1	2	3	1	2	3	
C. B. & Q.	1	1			240	192		10	15	11
C. R. I. & P.					140	82		2	3	12
Chicago & Alton					267	810			9	28
Illinois Central			1		6	13		38	32	4
Freeport Div., I. C.										
Galena Div., C. & N. W.					43	15				2
Wis. Div., C. & N. W.										
Wabash					2			17	10	12
C. & E. I.								13	117	5
C. M. & St. P.	1	1	1		54	156		1	7	9
Wisconsin Central										
Chicago & Great West.					31	35				
A. T. & S. Fe.					481	907		11	31	11
E. J. & E.					85	47				3
Through and special	1				170	81		197	285	53
Total each grade	3	3	2		1519	2338		289	510	150
Total winter wheat						3857				970

Railroad.	SPRING WHEAT.									
	Colo-rado.		Northern.		2		3		4	
	2	3	2	3	2	3	2	3	2	3
C. B. & Q.					102	623	31		6	15
C. R. I. & P.					9	92	28		2	1
Chicago & Alton										
Illinois Central					5	53	4		1	1
Freeport Div., I. C.										
Galena Div., C. & N. W.					80	384	46		1	
Wis. Div., C. & N. W.										
Wabash					3	1	2			
C. & E. I.										
C. M. & St. P.					41	178	94		4	
Wisconsin Central										
Chicago & Great West.										
A. T. & S. Fe.										
E. J. & E.					8	14	4			
Through and special					4	47	21		1	4
Total each grade					4	295	1366		9	17
Total									1903	24

Railroad.	CORN.									
	Yellow.		White.		2		3		4	
	2	3	2	3	2	3	2	3	2	3
C. B. & Q.	1,673	385	210	166	4,846	2171	228		17	
C. R. I. & P.	857	369	168	15	3,485	865	687		27	
Chicago & Alton	1,043	57	319	18	1,412	62	118		3	
Illinois Central	1,497	105	473	59	952	162	95		1	
Freeport Div., I. C.										
Galena Div., C. & N. W.	281	239	29	18	289	379	339		19	
Wis. Div., C. & N. W.										
Wabash	414	112	454	58	585	156	90		1	
C. & E. I.	311	15	214	46	309	41	16		2	
C. M. & St. P.	150	196	9	13	787	509	250		6	
Wisconsin Central										
Chicago & Great West.	38	57	1		71	389	59		11	
A. T. & S. Fe.	475	24	98	6	797	101	19		7	
E. J. & E.	228	108	38	22	1,116	418	235		21	
Through and special	2		36	1	44	3	12		1	
Total each grade	6,999	1677	2049	422	14,693	5256	2143		116	
Total corn		2666		2471					22,213	

Railroad.	OATS AND RYE.									
	OATS.					RYE.				
	White.			2		3			4	
C. B. & Q.	67	1355	215	424		11	197	84	10	
C. R. I. & P.	31	758	20	587		9	26	105	31	5
Chicago & Alton	31	596	221	310	23	23	2	3	1	
Illinois Central	87	2052	503	873		8	58	20		
Freeport Div., I. C.										
Galena Div., C. & N. W.	80	755	107	421		7	67	48	19	
Wis. Div., C. & N. W.	24	103	1	3			10	5		
Wabash	71	641	232	409		28	11	3		
C. & E. I.		802	486	480		14	17	11		
C. M. & St. P.	87	773	80	254		10	132	34	7	
Wisconsin Central	1	19		1						
Chicago & Great West.	218	15	95			11	13	1		
A. T. & S. Fe.	229	188	168			10	4	1		
E. J. & E.	109	15	54			6	6	1		
Through and special	7	185	451	93		11	57	13	3	
Total each grade	504	8595	2564	4172		32	658	274	39	
Total oats							16015			
Total rye										971

* White Chopped.

Railroad.	BARLEY.									
	BayBrewing.					Chevalier.				
	3	3	2	3	4	5	No Grade.	Total No. Cars	all Gr'n by Roads	
C. B. & Q.					5	21	1	13,343		
C. R. I. & P.					8	116	12	8,560		
Chicago & Alton						1		5,339		
Illinois Central					15	42	3	7,145		
Freeport Div., I. C.										
Galena Div., C. & N. W.					36	97	5	3,808		
Wis. Div., C. & N. W.					17	8	3	185		
Wabash								3,328		
C. & E. I.								2,902		
C. M. & St. P.					30	55	28	3,972		
Wisconsin Central								32		
Chicago & Great West.					1	10		1,062		
A. T. & S. Fe.						7		3,592		
E. J. & E.					4	26		2,587		
Through and special								1,818		
Total each grade					5	116	383	52	11	57,693
Total barley								665		
Total grain, cars										57,693

VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, Sept. 11, 1897, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, Bu.	Oats, bu.	Rye, bu.	Barley, bu.
Albany		50,000	60,000		
Baltimore	1,315,000	1,430,000	442,000	87,000	
Boston	7,000	721,000	184,000		
Buffalo	464,000	1,954,000	329,000	52,000	486,000
do. afloat					
Chicago	2,034,000	16,150,000	4,277,000	551,000	53,000
do. afloat					
Cincinnati	5,000	4,000	46,000		2,000
Detroit	246,000	29,000	98,000	13,000	
Duluth	980,000	181,000	106,000	462,000	165,000
do. afloat					
Indianapolis	259,000	62,000	53,000	1,000	
Kansas City	1,556,000	299,000	113,000	10,000	
Milwaukee	17,000	212,000	22,000	52,000	33,000
do. afloat					
Minneapolis	2,640,000	24,000	193,000	15,000	6,000
Montreal	199,000	51,000	387,000	19,000	21,000
New York	1,010,000	5,588,000	1,989,000	504,000	21,000
do. afloat	17,000	155,000	23,000	9,000	
Oswego		118,000	5,000		20,000
Peoria		196,000	40,000		
Philadelphia	580,000	1,078,000	131,000		
St. Louis	1,603,000	414,000	228,000	141,000	
do. afloat	71,000				
Toledo	587,000	593,000	831,000	222,000	
do. afloat					
Toronto	21,000		5,000		1,000
On Canals	208,000	1,514,000	70,000	6,000	146,000
On Lakes	1,367,000	4,850,000	1,139,000	120,000	265,000
On Miss. River	40,000	21,000	1,000		
Total	15,766,000	33,604,000	9,701,000	2,349,000	1,330,000
Corresponding date 1896	47,602,000	13,007,000	8,078,000	1,777,000	1,152,000

GRAIN IN STORE AT OTHER POINTS.

In addition to the above there was in store, at the points named below, on the tenth day of the month, the following grain:

Richmond, Va., 13,587 bushels corn, 1,037 bushels oats. Reported by F. E. Swain, agent in charge of Richmond Elevator.

Fort William, Ont., 379,937 bushels wheat, against 1,436,247 in 1896; 10,990 bushels oats, against 144,490 in 1896; 1,093 bushels barley, against 34,499 in 1896. Reported by M. Sellers, agent Canadian Pacific Elevators.

FLAXSEED AT CHICAGO.

The receipts and shipments of flaxseed at Chicago during the 13 months ending with August, as reported by S. H. Stevens, flaxseed inspector of the Board of Trade, were as follows:

Months.	Receipts.		Shipments.	
	1897-98.	1896-97.	1897-98.	1896-97.
August	813,160	1,770,160	299,108	1,060,659
September		1,627,480		1,399,514
October		2,014,920		515,159
November		874,640		259,916
December		643,272		238,865
January		362,500		230,267
February		344,520		137,185
March		307,980		207,725
April		176,900		524,527
May		164,720		782,273
June		290,000		141,478
July		251,720		134,445
Total bushels	813,160	8,828,812	299,108	5,632,013

The receipts and shipments of flax seed at Chicago, for the month of August, were 1,402 cars, against 3,052 cars in August, 1896.

There was stored in Chicago, in regular elevators, at the close of business September 11, 952,654 bushels of flax seed, as follows: No. 1, North Western, 229,413 bushels; No. 1, 610,532 bushels; Rejected, 107,060 bushels; No Grade, 5,649 bushels. This is an increase for the week of 38,639 bushels and an increase of 478,945 bushels over the amount in store Sept. 12, 1896.

EXPORTS FROM ATLANTIC PORTS.

The exports of breadstuffs, as compiled by George F. Stone, secretary of the Chicago Board of Trade, from the Atlantic ports during the two weeks ending Sept. 11, as compared with same weeks last year, have been as follows:

Articles.	For week ending Sept. 11. Sept. 12.		For week ending Sept. 4. Sept. 5.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	4,143,000	1,289,000	4,181,000	1,695 000
Corn, bushels.....	4,841,000	2,937,000	4 216,000	2,182,000
Oats, bushels.....	1,295,000	226,000	1,039,000	426 000
Rye, bushels.....	177,000	21,000	302,000	103,000
Flour, barrels.....	246.3.0	243.7.0	272.1.0	352.8.0

CROP REPORTS

[Readers will confer a favor by sending us reports each month of the acreage and condition of growing crops, the amount of grain and hay in farmers' hands and stocks in store, for publication in this department.]

INDIANA. Amboy, Miami Co., August 31.—The new wheat crop is very good and the higher prices will be the cause of a very large acreage being sown this fall. T. M. WARNE.

INDIANA.—The Indiana state report gives the area of wheat at 2,479,077 acres, average yield 15.23 bushels and total yield 37,769,875 bushels. This is about 9,000,000 bushels in excess of the returns indicated by the Department of Agriculture.

NEW YORK. Watertown, Jefferson Co., August 31.—We think growing buckwheat in this section is looking better than usual, that the acreage is slightly less than last season and that there has not been any frost as yet to injure it. A. H. HERRICK & SON.

NEW YORK. Dresden, Yates Co., August 30.—The buckwheat crop in this section is fully equal to the acreage of last year's crop and bids fair to be a better yield, if properly harvested. I do not know of any old buckwheat left over in farmers' hands. C. H. FERENBAUGH.

NEW YORK. Middle Grove, Saratoga Co., August 28.—The acreage of buckwheat growing in this district is about the same as last year. The condition is below that of last year. The amount of old buckwheat in farmers' hands is very small, it having been exhausted at seed time. G. G. WOODARD.

OHIO. Marshallville, Wayne Co., Sept. 10.—Wheat will average about 26 bushels per acre in this vicinity; oats about 44 bushels per acre on a total average taken from a thrasher's report. Seeding will not commence before the 20th of the month. It is very hot and dry now, too much so for corn. There is a big crop of clover seed. IRA GRABER.

NEBRASKA. Dannebrog, Howard Co., September 1.—Thrashing is in full blast here and the yield is good and of good quality. Spring wheat turns out 15 to 20 bushels per acre and some winter wheat yields 30 bushels. There will be a carload of rice wheat here for sale soon, but from the indications we have, it seems to be hard to dispose of it. Wheat has sold here in the local market for 85 cents, but is now selling for 72 cents. PETER C. JENSEN.

INDIANA. Logansport, Cass Co., August 14.—Our wheat crop is good, with the exception of having some rye in it, and brings 80 cents in the local market. Oats are splendid. Corn prospects are good, yet it needs rain. The outlook for clover seed has not been better for years. Owing to dry weather the potato crop is a failure. Farmers for the most part are bullish on their wheat; it is moving slowly. The large crop was put away without a shower on it. It looks like brighter skies and smoother sailing ahead. W. E. HURD.

PENNSYLVANIA. Bloomsburg, Columbia Co., August 30.—The buckwheat crop in this section will be shorter than that of last season. The acreage is not over 50 per cent, and the condition at this time possibly 75 per cent. Farmers did not sow this season because last year's crop brought them such a miserable price that there was no encouragement. There is not a large quantity of old buckwheat in the hands of farmers as the price ran so low they used it for feed. We anticipate that with the advance in wheat flour buckwheat meal will bring good prices this season. H. V. WHITE & CO.

MANITOBA GOVERNMENT CROP REPORT.—The midsummer crop bulletin of the Provincial Department of Agriculture was issued August 28. The estimated total yield of wheat is 21,284,274 bushels, the average being estimated at 16.49 bushels per acre. Manitoba's production of all kinds of cereals will be nearly 40,000,000 bushels. All departments of agriculture are reported to be in a satisfactory condition. The oats crop is estimated at 12,517,112 bushels, average yield per acre 26.73; barley crop, 3,644,788 bushels, average yield 23.8; flax, 369,795 bushels, average yield 15; rye, 55,037 bushels, average yield 18.5; peas, 38,287 bushels, average yield 23 bushels to the acre.

IOWA.—In the Weather Crop Bulletin of the Iowa Weather and Crop Service, issued September 6, it is stated that the effects of the hot, dry winds are noted in all sections. The further development of belated corn has been checked, and its chief value will be in the fodder that may be secured. Much of the early planted corn, which with normal temperature and moisture would have required from two to four weeks to ripen in the best condition, has been swiftly hurried to maturity. It remains to be seen how much shrinkage will be caused by this sudden transformation from milk and dough to the hardened, dented stage of ripeness. But unques-

tionably it would be materially better in quality of grain to ripen more slowly, under normal conditions. It is better thus, however, than the opposite extreme. By excessive heat and dryness much of the corn crop has been saved from the destructive effects of a killing frost:—"Saved, yet so as by fire." And those who cut their corn will thereby secure the larger measure of the feeding value of the crop.

GOVERNMENT CROP REPORT.—United States Department of Agriculture, Division of Statistics, Washington, D. C., Sept. 10, 1897.—The September report of the Statistician of the Department of Agriculture shows the following average conditions on September 1: Corn, 79.3; wheat, 85.7; oats, 84.6; barley, 86.4; rye, 90.1; buckwheat, 95.1; tobacco, 75.5; potatoes, 66.7. **CORN**—The condition of corn, 79.3, is 4.9 points lower than last month, 11.7 points lower than on Sept. 1, 1896, and 3.3 points lower than the September average for the last ten years. The principal state averages are as follows: Ohio, 84; Michigan, 88; Indiana, 82; Illinois, 84; Iowa, 79; Missouri, 74; Kansas, 61; Nebraska, 87; Texas, 81; Tennessee, 85; Kentucky, 83. **WHEAT**—The condition of wheat, 85.7, is 11.1 points higher than on Sept. 1, 1896, and 4.5 points higher than the September average for the last ten years. There is a marked decline in the principal spring wheat states as compared with last month. **OATS**—The average condition of oats is 84.6, as compared with 86 on August 1, with 74 on Sept. 1, 1896, and with 80.7, the September average for the last ten years. **BARLEY**—The average condition of barley, 86.4, shows a decline of 1.1 points during the month, but is higher by 3.3 points than on Sept. 1, 1896, and by 1.9 points than the September average for the last ten years. **RYE**—The average condition of rye, 90.1, is 8.1 points higher than on Sept. 1, 1896, and 3.1 points above the average for the last ten years. **BUCKWHEAT**—The condition of buckwheat, 95.1, shows a slight improvement during the month. It is 1.9 points higher than on Sept. 1, 1896, and 7.3 points higher than the September average for the last ten years. **TOBACCO**—The condition of tobacco has declined 3.2 points during the month, and is now 6 points below the condition on Sept. 1, 1896, and 4 points below the average condition for the last ten years. **POTATOES**—The average condition of potatoes has continued to fall, and is now only 66.7, or 11.2 points lower than on August 1, 16.5 points lower than on Sept. 1, 1896, and 11.7 points below the average for the last ten years.—JOHN HYDE, Statistician.

MICHIGAN.—Department of State, Lansing, Sept. 8, 1897.—For this report correspondents have secured from thrashers the results of 3,757 jobs, aggregating more than 65,000 acres of wheat thrashed in the state, the yield from which was 1,091,483 bushels, an average of 16.73 bushels per acre. In the southern counties more than 52,000 acres thrashed averaged 17.34 bushels per acre. In the central counties the average is 14.02 bushels, and in the northern counties 15.31 bushels. The area in wheat in the state last May, as compiled from the returns of supervisors, was 1,513,919 acres. This is the probable acreage that was harvested this year. Multiplying the acres in each county by the average yield per acre in that county, as now shown by the results of thrashings, gives a probable yield in the state of 24,821,987 bushels. The final estimate for wheat will be made in October. If it shall substantiate the foregoing the crop this year is the largest produced since 1892, when the crop exceeded 25,000,000 bushels. The number of bushels of wheat reported marketed by farmers since the August report was published is 1,187,750. Of this amount 400,177 bushels were marketed before August 1, but not reported until late in August, and 787,573 bushels in August. The amount of wheat reported marketed since the August report was published is 302,552 bushels more than reported for the same time in 1896, and the amount reported marketed in the twelve months ending with July, which is the wheat year for Michigan, is 10,531,053 bushels, or 847,880 bushels more than marketed in the same months of the previous year. The amount of wheat actually marketed in August this year, 787,573 bushels, is 335,441 bushels more than marketed in August last year. **OATS**—Thrashers' returns indicate that oats will yield in the state about 25 bushels, and **BARLEY** about 19 bushels per acre. The figures for oats are five bushels below, and for barley two bushels below, the estimate one year ago. **CORN** made slow growth in August, but it has not been damaged by frost and there is good reason to expect a good and well matured crop. The dry weather has undoubtedly injured potatoes, but the extent of damage cannot now be estimated. Beans are estimated to yield 87 per cent, of an average crop. The farm statistics of the state returned by the supervisors last spring furnished the following statistics of the wheat, corn and oat crop of 1896: Acres of wheat harvested, 1,431,203; bushels, 17,858,259; average per acre, 12.48 bushels. Acres of corn harvested, 1,198,009; bushels, 81,733,087. Acres of oats harvested, 923,228; bushels, 29,110,433. The farm statistics also furnish the following statistics of land in farms in 1897: Acres of improved land in farms,

9,020,220; unimproved, 4,302,093; total area, 13,322,313; number of farms, 149,534; average size of farms, 89.01 acres. WASHINGTON GARDNER, Secretary of State.

KANSAS.—The Kansas State Board of Agriculture issued, Sept. 4, 1897, a press bulletin giving the condition of the Kansas corn crop August 31, as learned from its correspondents, together with probabilities as to the acreage of winter wheat that will be sown the present season. As a rule, and except in a few of the counties along or near the northern border the reports plainly point out that the latter half of August owing to general lack of rainfall and severely drying weather, was a trying period for nearly all corn, and more especially that not planted sufficiently early to be previously well-nigh "made." These conditions have in many counties materially checked the growth of ears and stalk, hastened their premature ripening and diminished bulk, weight and quality. Future rains can work but little improvement except in some localities where conditions have been uninterruptedly favorable. In fact in the southern half of the state cutting and shocking has been actively going on for two weeks or more and much of this corn can afford but shriveled nubbins, or less, and fodder more or less inferior. Washington County, as last month, leads in high percentage of condition, with Republic, Sheridan and Sherman very close up, reporting 100 or above. Jewell has dropped back fully 20 per cent, within the month. The general condition for the state is now 55, or 5 points lower than one month ago. The yield of corn now in sight as carefully figured from the judgments of the growers, made, of course, before any husking has been done, is, for the entire state, practically 20 bushels per acre, or 165,677,280 bushels. The counties given as having yields of 30 bushels or more per acre are: Republic, 35 bushels; Washington, 35; Sheridan, 33; Jewell, 32; Wyandotte, 32; Decatur, 31; Doniphan, 31; Clay, 30; Nemaha, 30; Marshall, 30. The counties with the largest aggregate yield are Jewell, with 8,032,064 bushels; Republic, 7,128,170; Marshall, 6,882,230; Washington, 6,812,855; Nemaha 6,538,890; Smith, 5,774,328. These six counties, constituting a strip of land 174 miles east and west and 29 miles wide, produce 41,168,531 bushels of corn, and its last year's product was 49,085,079 bushels. The same counties reported to assessors in March as having 21,633,942 bushels of their old corn on hand. **PROBABLE WINTER WHEAT ACREAGE.**—The estimate of one month ago of a 10 per cent, increase in the acreage of wheat that would be sown this fall is now set forward by the farmers to 18 per cent, (no one county reporting a decrease), which would make an aggregate of 3,940,170 acres. Such an enlarged sowing will be mainly due to rapid advance in prices during the month and the encouragement found in having previous estimates on this year's yield borne out by the thrashing machines and scales. Should the soil continue, as now, so dry as to interfere seriously with plowing and seeding until late, the contemplated increase will hardly be realized.

KENTUCKY.—The report for September 1 is made up from replies received from 150 correspondents, representing 98 counties. **CORN**—Drouth has prevailed over a major portion of the state during the month of August, and as a consequence the condition of the corn crop has fallen from 93 on August 1 to 88 on September 1. The average is considerably helped by flattering reports from a number of counties in Eastern Kentucky, which in reality produce a very small per cent, of the crop. With these counties out the percentage would be reduced below 88. The most distressing reports are from the counties of Breckinridge, Daviess and Grayson, where the drouth has been unusually long and severe. In Daviess County it is hard to figure out 53 per cent, of an average crop. The counties in the western and central sections showing a condition of 100 and over are Adair, 107; Ballard, 105; Bath, 100; Carlisle, 100; Christian, 100; Gallatin, 100; Green, 100; Metcalfe, 105; Spencer, 100; Todd, 100, and Trigg, 100. Early corn will, to a great extent, constitute the only portion of the crop of any value, the late corn being generally inferior and containing many stalks wholly devoid of ears or shoots. Answers to question "Date on which crop will be safe from frost" show a late fall will be required for maturity of a large per cent, of the crop. **HEMP**—The estimated yield of hemp per acre averages 761 pounds. The crop, as a rule, is very inferior, and a large portion of it will not be cut. **PASTURES**—Pastures have fared badly during the month, and unless rain comes at an early date the fall grazing will be very poor. Condition averages 88. On August 1 the condition was 97. **WHEAT**—Preparations are being made for a large acreage of wheat, but fall plowing is practically at a standstill, and if present conditions are maintained the acreage may be curtailed considerably. Seeding in corn will be late on account of the green stage of the crop. Farmers have and will continue to reap the benefit of the recent advance in the price of wheat as they still hold 56 per cent, of the crop. The amount on hand ranges from 93 per cent, in Taylor County to 25 per cent, in Fulton

County. This advance in price has been followed by a fair advance in price of all farm products. Next in importance to rise in the price of wheat and tobacco is the advance in the price of cattle, sheep, hogs and mules in about the order named. Corn, which has been so low for a long period, promises to show a substantial gain in the near future, and on the whole the outlook for the Kentucky farmer will compare favorably with that of any other business man. From every section come reports of new life and new energy manifested by farmers, and in the bright outlook the bitter experiences of the past season of adversity are being forgotten; but there are a few lessons taught by these bitter experiences that should be carefully commended for future use; the very necessary lessons of thrift and economy. LUCAS MOORE, Commissioner of Agriculture.

MISSOURI, Columbia, Sept. 4.—The Secretary of the Missouri Board of Agriculture has submitted the following estimate of crops for 1897 and a comparison with 1895-96: CORN, acreage for 1895 was estimated at 6,577,000; yield 38 bushels per acre; total yield, 250,000,000 bushels. For 1896 the acreage was 6,250,000; yield, 32 bushels per acre; total, 200,000,000 bushels. For 1897 the acreage is 6,312,000; yield, 27 bushels per acre; total, 170,000,000 bushels, but reports for this season indicate better crop conditions in sections with largest acreage, and a compilation by counties gives a total yield of 183,000,000 for 1897. WHEAT acreage in 1895 was 1,550,000; yield, 11 bushels per acre; total, 17,000,000 bushels, against 23,000,000 bushels for 1894. For 1896 the acreage harvested was 1,271,000; yield, 10 bushels per acre; total, 12,710,000 bushels. For 1897 the acreage sown was the same as 1896, but was materially reduced through the winter, leaving the acreage harvested for 1897 at 940,000; yield, 10 bushels per acre; total yield, 9,400,000 bushels. OATS acreage for 1895 was 1,140,000; yield, 30 bushels per acre; total, 34,200,000 bushels. For 1896 the acreage was the same as the previous season, or 1,140,000 acres; the yield per acre was 19 bushels, or a total of 22,660,000 bushels. For 1897 the acreage was reduced by continued rains at seeding time to 1,037,000 acres. The yield was estimated at 28 bushels per acre; total for the state, 29,000,000 bushels.

COMMISSION

George W. Silsby & Co., brokers of Washington, D. C., have suspended.

C. F. Kauf has withdrawn from the Kauf Grain & Produce Co. of St. Paul, Minn.

J. H. Paine has withdrawn from the grain firm of Paine Bros. & Co. of Milwaukee, Wis.

Don L. Willard has withdrawn from the Willard Storage & Commission Co. of Great Falls, Mont.

Austin, Hall & Co. have succeeded Austin, Fraser & Co., a grain commission firm of Minneapolis, Minn.

The Benedict Commission Co., Ltd., has succeeded H. W. Benedict, hay and grain dealer of New Orleans, La.

J. M. Girwin & Co., a general commission firm of Baltimore, Md., has dissolved partnership. The business is being continued by J. M. Girwin.

Abbott, Richmond & Co., a grain commission firm of Minneapolis, Minn., made an assignment recently. J. H. Abbott assured all liabilities, and all creditors were paid.

Paul H. Vilmar, grain exporter of New York, has made an assignment. The liabilities are reported at \$50,000, with assets of \$6,510, mainly consisting of outstanding contracts made by him for the purchase of grain deliverable in August and September.

S. W. Edwards & Son of Chicago, Ill., have improved their grain and hay warehouse by the addition of some new machines. They included a new dust collector, purchased of the John T. Noye Mfg. Co., and a new grain crusher. Some new conveyors were also added.

The T. A. Wright Grain Commission Company of Kansas City, Mo., has come to an end by the expiration of its charter. P. T. Hamm, who has been the resident and managing partner for some years, will continue the business under the firm name of P. T. Hamm & Co.

The R. E. Craig Company of Richmond, Va., was granted a charter September 8, to carry on a general receiving and shipping business in hay and grain. The company also wishes to engage in the brokerage, warehouse and commission business. The capital stock of the company will be not less than \$1,000 nor more than \$10,000, and will be divided into shares of \$25 each. The company is not to own over five acres of land in Richmond and may own 500 acres outside of the city. The officers, all of Richmond, are as follows: R. E. Craig, presi-

dent; D. I. Cheatham, secretary; W. F. Seymour, treasurer; R. L. Montague, attorney; H. Carriek, together with the officers, directors.

A. C. Chatman Jr. & Co., brokers in grain, stocks and provisions at Philadelphia, Pa., have made an assignment. It is expected business will be resumed at an early date.

The S. W. Browne Company of Brooklyn, N. Y., has been organized to carry on a commission and jobbing business in grain, hay, feed and straw and a storage and warehouse business. The capital stock is \$80,000. The directors are William E. Truesdell, Frederick H. Warlow, Cornelius C. Watrous of Brooklyn and others.

The Davis-Palmer Company has discontinued its grain business at Minneapolis, Minn., the Van Dusen-Harrington Company succeeding to its interests. The company's line of elevators will be managed by George Palmer, from Mankato, the Van Dusen-Harrington Company receiving on consignment the grain handled through them.

Herb Bros. & Martin, since succeeding John Hood, who conducted a general commission business in grain, hay and feed at Pittsburg, Pa., have built up a very extensive trade. The firm is composed of Herb Bros., a former well-known firm of Pittsburg, and R. S. Martin, who was in the employ of John Hood for several years before his death.

WATERWAYS

Ship brokers of Galveston, Tex., are agitating the question of securing a floating elevator for that port.

Shipments by lake from Chicago for the week ending September 4 reached the enormous total of 217,000 tons.

The Erie Canal handled almost no grain in the early summer, but now the boats are having a lively business.

Kalbfleisch & Raymond are building a floating elevator at Buffalo. The tower will have four marine legs and will be 85 feet high and 30x55 feet in size.

Philadelphia shipped 21 full cargoes of grain in August, principally corn, which amounted to 2,923,000 bushels, nearly six times as much as during August, 1896.

For the first time in years the Illinois & Michigan Canal is carrying grain in considerable quantities. The Rock Island, which parallels it, has had more traffic than the road could handle.

The steel steamer Yale arrived in Chicago Sunday morning at 5 o'clock, loaded up with 174,500 bushels of corn at the St. Paul Elevator and was out on the lake again soon after 5 o'clock in the afternoon.

The 20 and 21 foot channels through the connecting waters of the great lakes, completed this summer, cost the government \$3,340,000. The work was commenced in 1893. There were eight sections of it.

Congress has appropriated \$150,000 to be expended in surveys or other work of investigating as to the feasibility of a canal connecting the great lakes with the Atlantic Ocean. A commission of three will be appointed to confer with a similar Canadian commission.

There is a report abroad that English capitalists will construct the Pittsburg & Lake Erie Canal. It will connect the Ohio River at Rochester, Pa., with Lake Erie at Ashtabula, Ohio, and it is estimated that the amount of ore and coal traffic will alone pay the dividends on the investment.

About the most rapid business done in grain chartering on record occurred September 8 in Chicago. The steamer Helena, coming up Lake Michigan, was chartered at 9:55 a. m. She rounded the piers at 10 o'clock, went to the Central Elevator and commenced taking on 100,000 bushels of corn at 10:20. At 2 o'clock p. m. she got away.

The Baltimore Sun, speaking of the old-time Baltimore clipper ships which were generally of from 900 to 1,000 tons' burden, says that one steamer lately took to Antwerp from Baltimore a cargo of 326,699 bushels of grain that would have required the services of eleven clippers, taken a month to do it in and required a long time to load.

The quantities of grain now being moved are so large that vessels are being loaded to their utmost capacity, and consequently there is daily news of record breaking shipments. The vessels of Capt. James Davidson carried very large cargoes from Duluth during the latter part of August. The Appomattox carried a load of 115,000 bushels of wheat, or 3,450 tons. The schooner Crete had on board 123,000 bushels of wheat, or 3,690 tons. The schooner Armenia carried 122,786 bushels of wheat, or 3,684 tons, and the schooner Algeria 122,000 bushels of

wheat, or 3,660 tons. The number of bushels in all the vessels aggregated 482,786 bushels, or 14,484 tons. This was the largest consignment of grain that ever left a lake port in a single tow.

The British steamer Knight Bachelor sailed from Baltimore for Antwerp recently with the largest cargo of grain that ever left that port. The cargo consisted of 328,600 bushels of grain, or 41,075 quarters. It required 21 railroad trains of 20 cars each to carry the grain to the water front. There was in all 64,000 bushels of corn, and 264,000 bushels of wheat.

George G. Tunnell has entered upon his duties as special agent of the United States government on lake transportation. He will make exhaustive studies of the grain and lumber traffic of South Chicago, Ill., and will visit Duluth, and the ports of Lake Huron and Lake Erie. He will finish his work for the season at Buffalo, and will then return to Chicago to complete his reports.

Eastbound shipments by lake lines from Chicago for the week ending August 28 aggregated 199,138 tons. This exceeds the total shipments ever before made from Chicago by 30,000 tons. Shipments became so large that lake lines advanced the rate on grain from 1½ cents a bushel to 1½ cents per bushel in order to prevent more freight being offered than there was vessel room. It was expected that the reduction of 6 cents per 100 pounds on grain from the Missouri River to New Orleans by the Fort Scott & Memphis Railroad would lessen the shipments from the Missouri River to Chicago.

With an all-water route to New York, and the resulting low and stable rates of transportation, Buffalo would be a gainer as well as New York. Plenty of work would be left for the elevators, as no one supposes the great trunk lines will go out of the grain-carrying business entirely. By diverting a large percentage of the grain shipments bound for Baltimore and other southern ports, there will be plenty for both the railways and the enlarged canal. If something of this kind be not done, Baltimore will continue to be a gainer at the expense of New York, Buffalo as well.—Marine Record.

The steam barge City of Bangor, laden with 175,000 bushels of corn, consumed 19½ hours recently in making the distance from the Armour E Elevator, near Halsted Street, Chicago, to Lake Michigan. Four tugs worked at pulling the boat along the muddy bottom of the river, and her iron keel scraped along the top of the Washington Street tunnel in such a manner it was feared the masonry of the tunnel would be demolished. The boat finally passed in safety, however, to the lake. It was the largest cargo ever transported through the Chicago River. The boat drew 18 feet 4 inches forward, and 17 feet 1 inch aft.

The grain business at Buffalo for August and for the eight months of the year ending September 1, was as follows: The receipts of grain from the West by lake for August this year were 25,551,716, against 20,286,878 for August last year, and, measuring the flour received as grain, the totals in bushels were for August 32,000,000 this year to 26,000,000 last year. The totals for the eight months were 125,000,000 this year, against 107,000,000 last year. The shipments of grain for the month of August by canal this year were 3,546,488 bushels, against 5,288,173 last, and from the opening of navigation 12,789,022 this year, against 21,664,253 last. The number of canal boats cleared from Buffalo this year to September 1 was 2,506 this year, against 3,271 last. Rail shipments this year for August were 17,345,000 bushels, against 12,924,220 last. And for the eight months 71,943,400 this year, against 64,207,420 last.

The railroads are making life miserable for elevator and mill men, watching lest they keep a car ten minutes longer than they ought.

Kansas City has never prosecuted her bucket-shop keepers, but proposes to do so now. The bucket-shop men declare that they keep within the Missouri law.

A man named McCaslin, at Scottsburg, Ind., has produced a new variety of corn which will yield from 100 to 250 bushels to the acre, so he says. Each stalk of corn produces five well filled ears at least, while some produce ten. The cornstalk is probably of solid steel to hold up such a weight.

Some time since the corporate life of the Farmers' Elevator Company at Doland expired by the terms of the original articles, and later the board of directors sold the elevator and its machinery to a company of gentlemen, among whom were several who had been interested in the first enterprise. Mr. Sterling, representing some of the stockholders, presented a motion to have such sale declared invalid and void, charging fraud in the transaction and alleging that the directors discouraged free and open bidding for the property. Mr. Kornis appeared to resist such application. No conclusion was reached, as the proceedings were continued.—News, Aberdeen, S. Dak.

ELEVATOR

GRAIN NEWS

Ida, Mich., will have a new grain elevator.

An elevator is to be erected at Shumway, Ill.

A new elevator is being erected at Brigden, Ont.

Brandt, S. Dak., will have a new grain elevator.

McCabe Bros. will build an elevator at Backos, N. Dak.

J. F. Mager will erect an elevator at Walhalla, N. Dak.

A new grain elevator is being built at Tecumseh, Ohio.

A new grain elevator is being built at Anthon, Iowa.

S. W. Skeels is again buying wheat at Conklin, Mich.

A new 20-ton cottonseed oil mill will be built at Lavonia, Tex.

T. M. Michael is building a new grain elevator at Bryant, S. Dak.

O'Connor Bros. intend to build an elevator at Leydon, N. Dak.

Hanson Bros. will build a new grain elevator at Hammond, Wis.

Mr. Henderson has completed his grain elevator at Popejoy, Iowa.

C. A. Klatt is erecting a 10,000-bushel elevator at Annandale, Minn.

W. D. Russell has completed a new grain elevator at Defiance, Ohio.

A new grain elevator is being built at Hayes, Ill., at a cost of \$3,300.

N. W. Bacon has bought R. D. Lamson's elevator at Hastings, Neb.

C. C. May & Co. are building a new grain elevator at Cambridge, Wis.

C. J. Miller has added a grain cleaner to his elevator at Flint, Mich.

Hagener Bros. are building a large new grain elevator at Concord, Ill.

Gyles & Poidexter have opened their grain elevator at Everton, Mo.

Ed. Ketcham has opened his grain elevator at Willow Lake, S. Dak.

Grier Bros. have completed a large elevator at Big Stone City, S. Dak.

A new 50,000-bushel grain elevator will be built at Miller's Station, Mo.

Miller Bros. are handling a small new grain elevator at St. Louis, Mo.

A new grain elevator is being built at Woodbine, Iowa, by De Cou Bros.

Three new grain elevators will be built at Kuhn, N. Dak., during the fall.

A number of new wheat warehouses will be erected at Oakland, Cal.

Hofmeister & Meyer will build a new grain elevator at Leunox, S. Dak.

Farmers are building an elevator at Correll, Minn., of 15,000 bushels' capacity.

F. Lavoie & Cie., grain dealers of St. Martin, Que., have dissolved partnership.

Geraghty & Feely have completed their new elevator at Farmington, Minn.

Hanson & Sons have completed their new grain elevator at Hampton, Iowa.

Isaac Miller has bought James Cunningham's grain business at Wellman, Iowa.

Cox & Bailey have succeeded Z. H. Cox, grain dealer of Nacogdoches, Tex.

R. W. Fleming has purchased Alden Armstrong's elevator at Lake View, Iowa.

A new grain elevator has been completed at Fiat, Ohio, by Buckley & Persley.

W. J. Stevens will build a 10,000-bushel grain elevator at Hennessey, Okla.

The Atlantic Elevator Co. has completed its new elevator at Annandale, Minn.

A new grain elevator is being built at Manning, Iowa, and will be operated under the management of U. L. Patton & Son. It is expected to be com-

pleted by September 20. Power will be furnished by a gasoline engine.

E. L. Stinson has succeeded E. L. Stinson & Co., grain dealers, of Ennis, Texas.

Hunnick Bros. have purchased L. D. Hodgson & Co.'s elevator at Ottosen, Iowa.

John Wilson has commenced the erection of a new grain elevator at Barnard, Ind.

Snow & Palmer are building a silo 20 feet square and 24 feet deep at McLean, Ill.

E. F. Beldeu is building a new grain elevator and flour mill at Rocky Hill, Conn.

It is said that the State Elevator Co. will erect an elevator at Walhalla, N. Dak.

A. G. Tanton of Grand Forks, N. Dak., will erect a 40,000-bushel elevator at Grafton.

E. A. Rippe has built a new wagon dump at his grain elevator at Bryant, S. Dak.

J. O. Milligan, grain dealer of Wakefield, Nebr., is building an elevator at Pender.

The Interstate Elevator Co. is erecting a 50,000-bushel elevator at Le Mars, Iowa.

M. Waggoner has succeeded Waggoner & Aiton, grain dealers, of Kingman, Kans.

Burgess & Co. have succeeded Nutter & Co., grain dealers at Hollenberg, Kans.

William Herriot, grain dealer, of Grafton, N. Dak., is building an elevator at Walhalla.

H. H. French has sold his grain elevator at Southbridge, R. I., to L. C. Prindle & Co.

F. A. Spaulding, grain dealer, of Walpole, N. H., has erected a storehouse for grain.

F. L. Wheeler has succeeded F. N. Thiesen, grain and coal dealer of Howard, S. Dak.

Penberthy & Kreger's new grain elevator at Clear Lake, S. Dak., is almost completed.

Bingham Bros. will build a new elevator of 10,000 bushels' capacity at Gilfillan, Minn.

A new addition has been completed to the farmers' grain elevator at Brookings, S. Dak.

McMichael & Son, grain dealers, of McGregor, Iowa, have removed to Chicago, Ill.

R. G. and C. H. Risser of Kankakee, Ill., have purchased the grain elevator at Tucker.

The Lake of the Woods Milling Co. is thinking of erecting an elevator at Stockton, Man.

J. N. Shuler has engaged in the grain business at the old Eames Elevator at Ottawa, Ill.

Bennett Taylor has commenced the erection of a new grain elevator at Kirkpatrick, Ind.

The Perth Flax & Cordage Co. of Stratford, Ont., will erect a flax mill, etc., at that place.

The Cargill Elevator Co. of Minneapolis is erecting a 20,000-bushel elevator at Fulda, Minn.

W. C. Alten has commenced the erection of a large grain elevator at Forest Junction, Wis.

Frank J. Alexander is erecting a building at Norwich, Conn., to be used as a grain store.

Henry Streeter has opened his elevator at Jeddo, Mich., and engaged in the grain business.

Peterson Bros. have reopened their elevator at Shindlar, S. Dak., and are buying grain.

The Great Western Elevator Co. is erecting a 35,000-bushel elevator at Henuing, Minn.

It is reported that R. H. Grams will build a 15,000-bushel grain elevator at Dumont, Minn.

C. L. Burgess has succeeded to the business of the Julian Elevator Company of Julian, Nebr.

F. H. Peavey & Co. have commenced the erection of a new grain elevator at Montrose, S. D.

M. W. Lee of Maurice, Iowa, has purchased the elevator of S. G. Liscomb at Dunlap, Iowa.

Owen M. Best has succeeded to the grain business of H. A. and O. M. Best of Edinburg, Ill.

W. H. Pierce is contemplating building a new 20,000-bushel grain elevator at Dexter, Minn.

Geo. Vedder has purchased a half interest in the Howlett Grain Elevator at Madison, S. Dak.

The Cargill & Hyde grain warehouse at Fairmont, Minn., has been remodeled into an elevator.

Dallas Reed has purchased Abraham Bennett's interest in the elevator at South Milford, Ind.

A new 25,000-bushel grain elevator will be built at Winnebago City, Minn., by the Hyde Elevator Co.

Conger & Beier, dealers in grain and coal at Fletcher, Ill., are erecting an elevator at that place which will have a capacity of 25,000 bushels. The

elevator will be so arranged as to obviate the use of a shovel either in the building or in cars.

Crabbs & Reynolds are building an elevator at Waynetown, Ind., where they will buy grain.

A. A. Moody & Co. have succeeded Rugh & Moody, wholesale grain dealers, of Ft. Collins, Colo.

Peter Hyde & Co. are making arrangements to build a new grain elevator at Appleton, Wis.

The Interstate Elevator at Gibbon, Minn., has been opened with John W. Gleisner as buyer.

The Northern Grain Co. has completed and is now operating a new elevator at Arthur, Iowa.

Karl Kowalke has resumed buying on the market at La Crosse, Wis., for the Cargill Elevator Co.

Perry & Porter and F. A. Spaulding are erecting storehouses for grain at Walpole Station, N. H.

The A. A. Davis Milling Co. has leased the Northern Pacific Elevator at Davenport, Wash.

The S. Y. Hyde Co. is erecting an elevator at Fulda, Minn., to have a capacity of 30,000 bushels.

James Porch of Chebanse, Ill., is contemplating building a new 100,000-bushel elevator at Cabery.

C. P. Chapman & Co.'s elevator at New Salem, Ill., which was destroyed by fire June 24, is being rebuilt.

Snyder Bros., grain dealers of Stanford, Ill., have purchased and are operating an elevator at Pontiac.

J. H. Dickson of Scotland, S. Dak., has commenced the erection of a large grain elevator at Lesterville.

Empey & Woodard have purchased and are operating the new grain elevator at Empire City, Minn.

H. H. Troth has built an elevator at McCook, Nebr., where he has engaged in the grain business.

M. W. Hostetter is building an elevator at Herriot, N. Dak., where he will engage in the grain business.

F. W. Obermiller has sold his grain elevator at Kenney, Ill., to Joel Williams and Willis Samuels.

Levi Johnston is enlarging his grain office at Danvers, Ill., to accommodate his increasing grain business.

F. H. Woods has completed his new elevator at Tuscola, Ill., and has engaged in the grain business.

Fairbanks, Morse & Co. are putting in the scales for the Northern Elevator Co.'s elevator at Buffalo, N. Y.

It is said the Winona Elevator Company will commence the erection of a new elevator at Bancroft, Iowa.

S. W. Davis and M. Dworak have formed a partnership to engage in the grain business at Niobrara, Nebr.

J. E. Farnham and F. A. Robins are contemplating the erection of a new grain elevator at Rothbury, Mich.

A new elevator has been completed at Kingsley, Iowa, and Henry Herron is buying grain for the owners.

Whilaker & Son have repaired their grain elevator at Ellsworth, Ill., and have added some new machinery.

Howrey & Geiger is the name of a firm recently organized at Kemp, Ill., to engage in the grain business.

Seymour Bros., an old established grain and coal firm of Warren, R. I., has applied for relief in insolvency.

The Northern Grain Co. has a new elevator at Vail, Iowa, which was erected by the Barnett & Record Co.

Gardner & Lundberg have commenced the erection of a new 25,000-bushel grain elevator at Forest City, Iowa.

The new grain elevator at Warner, S. Dak., is almost completed. Power will be furnished by a gasoline engine.

E. S. Woodworth & Co., feed and grain dealers, of Minneapolis Minn., have increased their capital stock to \$100,000.

J. B. Drake has torn down the Kring Elevator at Kappa, Ill., and will build a 24,000-bushel elevator in its place.

Carrington, Hannah & Co., grain merchants, of Chicago, are erecting a 20,000-bushel elevator at Manteno, Ill.

John Dick of Newton, Kans., has purchased the Watson Elevator in that city, and will build a 400-barrel mill, which he will operate in connection with it.

The Canadian Pacific R. R. Co.'s elevator at Ft. William, Ont., the contract for the construction of which has been let, will have a capacity of 1,500,000 bushels, and will be so constructed that this capacity

can be doubled. The elevator will be of steel construction, and it is expected to be finished next February.

J. H. Hulbert of Fontanelle, Iowa, is making arrangements to build a new grain elevator at that place.

The firm of Barnes & Foot, feed dealers, of Malone, N. Y., has been dissolved, O. J. Barnes continuing the business.

Gold Bros. of Ortonville, Minn., have purchased and are operating the Crown Elevator Co.'s elevator at Ortonville.

W. L. Kinsman has purchased the old Buckingham Elevator at Loda, Ill., and will engage in the grain business.

Mr. Bruce of Greene, Iowa, has leased O'Connor's elevator at Burdette, where he has engaged in the grain business.

The Great Western Elevator Co. is building a 35,000-bushel elevator at Villard, Minn., where it will buy grain.

The Atchison Grain Company has ceased operating its Atchison, Topeka & Santa Fe Elevator at Atchison, Kans.

J. H. Chamberlain of Decatur, Ill., has purchased the grain elevator owned by F. P. Rush & Co. at Farmer City, Ill.

Conger & Byers of Fletcher, Ill., are building a new grain elevator with a capacity of 20,000 bushels at Cooksville.

D. V. Wood has purchased the interest of W. H. Fletcher in the grain firm of Wood & Fletcher of Waitsburg, Wash.

The Northern Elevator Company's new elevator at Baldur, Man., has been completed. It has a capacity of 30,000 bushels.

James Thompson has bought the old Hughes Elevator at Garrison, Iowa, where he has engaged in the grain business.

Perry J. Dinkler of Macon, Ga., has gone to the city of Mexico, Mexico, where he will engage in the grain business.

Jos. McFarland, who operates the grain elevator at Stanhope, Iowa, will make a number of improvements in the plant.

The Raymond Elevator at Buffalo, N. Y., and the New Ryan Elevator at Black Rock have each commenced operations.

The Guelph Linseed Oil Company, Guelph, Ont., has been organized to manufacture linseed oil, oil cake, flax meal, etc.

The Union Elevator at Council Bluffs, Iowa, which has been idle for the past two years, has been opened for business.

John Burtch & Co. have leased Smith's elevator at Grand Rapids, Mich., where they will engage in the grain business.

Hayward Bros., dealers in grain and lumber at Cropsey, Ill., have added a gasoline engine to their elevator at that place.

Arrangements are being made for the formation of a stock company to build a large grain elevator at Centerville, S. Dak.

Follett Bros. have completed a new elevator at Sherburne, Minn., and have engaged in the grain business at that place.

A new grain elevator having a capacity of 250,000 bushels was placed in operation at Charleston, S. C., on September 1.

Russell & Snider, millers of Wawanessa, Man., are building a 20,000-bushel grain elevator in connection with their mill.

Denton Bros., grain merchants of Leavenworth, Kans., have leased and are operating the B. & O. Elevator at Mobile, Ala.

Charles Tompkins has bought the old grain house of B. T. Railsback at Hopedale, Ill., and will remodel it to a grist mill.

Bartlett & Co., grain dealers, of Meekling, S. Dak., have dissolved partnership. The business will be continued by Mr. Taylor.

D. W. Eaves has engaged in the grain business at Lapwai, Idaho, and also at Agatha, having leased warehouses at both points.

Gores & Diffeng, general merchants, of Hampton, Minn., are building two elevators at that place, where they will buy grain.

Amos Rutter is enlarging the engine house at his elevator at New Holland, Pa., and will install a new 20-horse power gas engine.

The Alfred J. Brown Seed Co. has been incorporated at Grand Rapids, Mich. The company will succeed the Alfred J. Brown Company in the seed, fruit and grain business. The capital stock is

\$10,000, of which \$8,000 is paid in. The stockholders are Alfred J. Brown, Sally B. Brown, Henry Idema, James R. Wylie.

J. A. Marston, formerly of Elberton, Wash., is purchasing grain at Colfax for the firm of Hamilton & Rourke of Portland.

It is stated that the National Storage Co. of Jersey City, N. J., is preparing to erect elevators and warehouses at Jersey City.

Long & Van Rossum, grain dealers of Struble, Iowa, are erecting an elevator at Springfield, S. Dak., where they will buy grain.

The Northern Elevator Co. of Winnipeg, Man., has purchased the grain warehouse recently owned by John Brown at Saltecoats.

Geraghty & Feely's grain elevator at Farmington, Minn., has been completed. It was planned and built by Tromenhauser Bros.

The Mandan Mercantile Co. has let the contract for an elevator to be erected at Glen Ullin, N. Dak., to be 12,000 bushels' capacity.

A Farmers' elevator company has been organized at Coon Rapids, Iowa, and a contract has been let for the erection of an elevator.

Callahan & Sons have incorporated to succeed Callahan & Sons, owners of the grain elevators and feed dealers, of Louisville, Ky.

Thomas Gray of Mt. Pleasant, Mich., has purchased the elevator at Calkinsville, where he has engaged in the grain business.

The directors of the Farmers' Elevator Co. of Kenyon, Minn., held a meeting recently and declared a dividend of 25 per cent.

A. R. Gangloff, dealer in grain and implements at Knox City, Mo., has opened a branch house at Knox City, where he is handling grain.

The Crescent Grain Co. is building a large addition to its elevator at Covel, Ill., to accommodate its increasing business at that point.

The Crocker Elevator Co. is building a new oats house near its elevator at Emery, Ill., which will have a capacity of 30,000 bushels.

E. A. Brown of Luverne, Iowa, who controls several elevators, has purchased Armin & Shell's elevator and grain business at Sibley.

The Cargill Co. has refitted the old elevator at Twin Lakes, Minn., and has placed J. H. Finch of Winnebago City in charge as buyer.

Hale & Sons have overhauled and improved their grain warehouse at Stanton, Mich., to enable them to handle their increasing business.

The N. W. R. R. Co. has awarded its contract to Seeley, Son & Co. for an 80,000-bushel grain elevator, to be built at Audubon, Iowa.

Snyder Brothers of Stanford, Ill., have purchased a grain elevator at Claytonville, Ill., and will engage in the grain business in that city.

The Farmers' Elevator Co. has completed and opened its new elevator at Northfield, Minn. Hayden Sampson has charge of the elevator.

W. H. Shulte and C. L. Smith have purchased Perry Money-maker's elevator at Hopedale, Ill., and Mr. Smith will continue his grain business.

Stewart Bros., grain dealers, of Willow City, N. Dak., have erected an 18,000-bushel elevator at Towner, and expect to build one at Omamee.

John Hicks, grain dealer, of St. Johns, Mich., has installed a 15-horse power Fairbanks-Morse Gas Engine to operate his elevator at that place.

The Eureka Bazaar has commenced the erection of a grain elevator at Eureka, S. Dak. It will have a capacity of between 15,000 to 18,000 bushels.

The Hamilton Grain Co. has been organized to carry on business at Chattanooga, Tenn. The firm is composed of Chas. F. and H. H. Hood.

Malcolm McGillivray has leased the grain elevator owned by Howlet & Byrnes at Wentworth, S. Dak., and will operate it during the season.

John Lenhart of Elmdale, Mich., has purchased a store building and will use it as a warehouse in connection with his grain elevator at that place.

The Eagle Milling Co. has let the contract for the erection of a large grain warehouse at Tucson, Ariz., which will be completed by the middle of October.

F. J. Taylor & Co., grain dealers of Creston, Iowa, have purchased the grain elevator at Kent, Iowa, and will put it in shape for handling grain.

George Morrow has improved his elevator at Canton, Ill., by the addition of pneumatic machinery for loading ears of grain, which enables him to load 1,600 bushels of grain an hour, where he could load

only two or three ears per day by the old method. Savill & Sullivan, who have an elevator at the same place, have put in similar improvements.

The H. J. O'Neill Grain Co. has opened its elevator at Bethany, Minn., which has been closed for some time, and J. T. Drysdale is buying grain for the firm.

G. T. Bradshaw, formerly of Russell, Kans., writes us that he is erecting an elevator and flour mill at Hoisington, where he will engage in business.

W. W. McFall of Benton, Ill., has been adding a new elevator and conveyors to his house. The machinery complete was furnished by W. W. Stephens & Co.

In view of the large amounts of grain that are being handled at Cleveland, Ohio, it is thought that another elevator would be a paying property at that place.

A. E. McKenzie & Co., grain merchants, of Brandon, Man., have purchased the grain elevator at that place owned by A. McBean & Son of Winnipeg.

The two grain warehouses at Granada, Minn., one belonging to W. W. Cargill Bros. and the other to A. A. Wilson, have been remodeled into elevators.

A. E. Hutchinson, dealer in grain and coal, and S. T. Zeller, dealer in grain at Harmon, Ill., have formed a partnership and consolidated their businesses.

John W. Martin has purchased the grain elevator owned by O. H. Obert at Bancroft, Mich. He will operate the elevator in connection with his other business.

The Easton Farmers' Grain Co. is building an elevator at that place, where it will engage in the grain business. M. S. McClintock is secretary of the company.

J. R. Johnson has sold a half interest in his grain elevator at Nevada, Iowa, to Ben Sweanson. They will operate it under the firm name of Johnson & Sweanson.

L. C. Prindle & Co., grain dealers of Southbridge, Mass., have bought and are operating the elevator at that place of H. H. French, grain dealer, of Providence, R. I.

Adams' wharves at Port Costa, Cal., are to be improved by the addition of facilities for storing and handling sacked grain. These will consist mostly of warehouses.

The Pratt Grain Co. has been incorporated at Kansas City, Mo., with a capital stock of \$5,000. The incorporators are F. E. Pratt, I. Landa and M. E. Pratt.

John L. Dow & Co. have purchased the D. Rothschild Grain Co.'s elevator at Minden, Iowa. It is stated that J. H. C. Stuhr will buy grain for the new owners.

C. A. Pillsbury & Co. are completing a number of improvements and alterations on their grain elevator on Ninth Avenue S. E. and Ninth Street at Minneapolis, Minn.

The Marks Grain Co. of Austin, Texas, has been incorporated with a capital stock of \$15,000. The incorporators are C. T. Marks, C. J. Marks and H. L. Marks.

W. W. Stephens & Co. have recently furnished a complete elevator outfit, including shafting, pulleys, elevators, etc., for the new house of Sabin I. Stump, Armada, Mich.

H. H. Cheatham and B. F. Shields have opened offices and warehouses at Spokane, Wash., and will carry on business under the firm name of the Spokane Grain Co.

W. P. Bridgman, general merchant of Ashland, Maine, has purchased R. S. Dunn's feed business and will handle grain and feed in addition to his other business.

J. C. Geraghty of St. Paul, Minn., has purchased McGrail & Dwyer's elevator at Lakeville, and has engaged in the grain business at that place. James Dwyer will continue to buy grain for the new owner.

Geo. S. Hayes & Co., grain dealers, of Hastings, Nebr., have obtained possession of the elevator at Angus, and it is now being operated under the management of J. F. Jewett with Charles Bock as assistant.

D. R. Francis & Co. of St. Louis, Mo., have bought the interest of Mason Gregg in the Crescent Elevator, in the east bottoms, Kansas City. The house is now owned by the Francis Company and the Missouri, Kansas & Texas Trust Company. It will

be managed by J. O. Brandenbaugh, who was until recently the Kansas City representative of the W. D. Orthwein Grain Company of St. Louis.

E. A. Brown has put in a gasoline engine at his elevator at Luverne, Minn., and otherwise improved the house. He is also building an elevator at Ward, S. Dak.

Parrish & Lindsay, grain dealers of Brandon, Man., have joined the Manitoba Grain Co. and removed to Winnipeg. Their elevator at Brandon will continue in operation.

Wm. R. Kemp, grain dealer, of St. Clair, Mich., has suspended on account of an embarrassment, which is probably only temporary. He expects to start up again soon.

O. H. Obert of Bancroft, Mich., has sold his grain elevator at that place to J. W. Martin, and has removed to Durand, where he has engaged in the real estate business.

T. S. Cathcart & Sons, grain dealers of Kingsley, Iowa, are contemplating the erection of a large elevator and feed mill at that place, and materially increasing their business.

The Merrill Grain Company has been organized to carry on a general grain business at Solomon, Kans. The company is composed of Major H. B. Merrill and Mr. Watson.

T. D. Davidson has purchased both elevators at Grey Eagle, Minn., and will use one for a warehouse for flour and feed for that section of the country, and the other for wheat.

The foundations of the new Burlington Elevator at Peoria, Ill., have been completed, and work on the superstructure is under way. The Barnett & Record Co. has the contract.

The Samuel Born Co.'s new elevator at Lafayette, Ind., has been completed, and is now in operation. It has a capacity of 40,000 bushels, and has a fine equipment of machinery.

The Chicago Terminal Elevator Co. has purchased two No. 9 oat clippers of the Invincible Grain Cleaner Co., for its Rush Street Elevator. The order was taken by J. L. Wheeler.

Stetson & Warren have removed their grain business from the Grange building at East Sumner, Maine, to the old flour mill. They will remodel the mill and commence its operation.

The W. W. Cargill Co. has overhauled its grain elevator at Green Bay, Wis., and will resume business at all its stations located at different points throughout the West and South.

Denton & Miller, dealers in grain and hay at Pana, Ill., have dissolved partnership, and Mr. Miller continues the business. Mr. Denton will engage in the same business with J. W. Read.

The Commercial Elevator Co. of Duluth, Minn., has filed articles of incorporation with a capital stock of \$10,000. The incorporators are Henry Taylor, T. J. Davis and J. W. Hannes.

The firm of Knapp & Mangam has been incorporated at Jamaica, N. Y., to deal in grain, hay, etc. The members of the firm are Milton Knapp, D. D. Mangam Jr., and Wm. L. Mangam.

Charles Tracy, for several years manager of the Pacific Coast line of elevators owned by F. H. Peavey & Co., has engaged in the grain business on his own account at Portland, Ore.

It is stated that the Chicago Railway Terminal Elevator Co. of Chicago, Ill., will build a new elevator of not less than 2,000,000 bushels' capacity, to replace the one burned on August 5.

Seeley, Son & Co. have closed a contract with the Transmississippi Grain Co. of Chicago, Ill., for a 15,000-bushel elevator at Octavia, Nebr., and a 15,000-bushel elevator at Ireland, Nebr.

Dr. M. McLaughlin of Jackson, Mich., is about to erect an elevator at that place, and he and his brother James Laughlin, bean dealer, of Leslie, will engage in the bean and grain business.

The Atlas Grain Co. has engaged in the grain business at West Superior, Wis. F. H. Ellis, formerly of Owatonna, Minn., is president of the company, and S. W. Pierce is manager.

The Transmississippi Grain Company of Chicago, Ill., has been incorporated, with a capital stock of \$25,000. The incorporators are Henry A. Smith, George E. Fuller and Charles F. Price.

Charles Bender, formerly with the Spencer Grain Co., Spencer, Iowa, has formed a partnership with Mr. Floete of the same place, to engage in the grain business. An elevator will be erected.

It is reported that a new grain elevator will be built at West Superior, Wis., by a company of which H. H. L. Chaffee, general manager of the Sharon Land Company of Armenia, N. Dak., is the head. The site will be between the Northern Pacific and

Great Northern railroads, and will be donated by the Land and River Improvement Company. The elevator will have a capacity of 200,000 bushels.

The Empire Elevator at Wilmot, S. Dak., has been opened, with F. M. Smith in charge. The St. Anthony Elevator in the same city has also opened for business, with A. T. Garson as buyer.

The McMichael Elevator Co., whose headquarters have heretofore been at McGregor, Iowa, is now transacting its general business in Chicago, Ill., where it has established its headquarters.

The Rock Island Elevator "B," formerly controlled by Congdon & Co., has been transferred to Charles Counselman & Co. The two Rock Island elevators are now under one management.

Two new grain elevators are being built at Canova, S. Dak., one of a capacity of 25,000 bushels is being built by the Interstate Elevator Co., and one of a capacity of 15,000 bushels by Gapp & Ellis.

The Consolidated Elevator Company has commenced the work of remodeling the Northern Pacific Elevator at Wahpeton, N. Dak. A new gasoline engine will be included among the improvements.

C. E. Burns of Howell, Mich., has been making extensive changes in his plants at Howell, Owosso and Whitmore Lake. All the machinery, belting, etc., was furnished by W. W. Stephens & Company.

The Middle Division Elevator Co. has completed its 80,000-bushel elevator at Heyworth, Ill., and the new house is in operation under the management of Jacob Gault. Power is supplied by a gasoline engine.

John Benoit, who recently bought L. Euzière & Son's elevator at Tucker, Ill., where he intended to engage in buying grain, has sold the house to C. H. & R. G. Risser of Kankakee, and that firm will operate it.

The Western Elevator Company, Nora Springs, Iowa, has been making some changes in its plant, putting in a new elevator, horse power, etc. The equipment was furnished by W. W. Stephens & Company.

The National Elevator Co. of Winona, Minn., held its annual meeting recently, at which the following officers were elected: S. Y. Hyde of La Crosse, president; H. J. O'Neill of Chicago, secretary and treasurer.

The Garfield Hardware and Mercantile Co. has leased the Tacoma Grain Company's two elevators at Garfield, Wash., and will operate them. The elevators are under the management of W. P. Lawrence.

The F. Schwartz Grain and Flour Company of St. Louis, Mo., has been incorporated with a capital stock of \$5,000. The incorporators are Mary Schwartz, Herman Schwartz, Frederick Schwartz and others.

The Pollock Bros. Grain Co. of Collison, Ill., writes us that it has sold its elevators at Collison, Bennett, Jamesburg and Brothers. The purchaser was the Rogers Grain Co., which is now conducting the business.

A new grain elevator is being built at Pensacola, Fla., on the Louisville & Nashville Railroad's dock. The building has been encircled by a cordon of electric lights, and a night as well as day shift is working regularly.

The elevator at Augusta, Ga., which has been operated for some years by Messrs. Burm, Doolittle and others, has been leased by L. J. Miller, who will put in the necessary machinery and operate it as a corn mill.

The Steadman-Irwin Elevator Co. of Sauk Center, Minn., has completed an elevator at Little Sauk, and will build one at Long Prairie. With the completion of this house the company will have five elevators in operation.

G. H. V. Bulvea, dealer in grain, feed and flour at Qu'Appelle, N. W. T., has arranged to handle wheat at that point, and McLean Station, through the Manitoba Elevator Company, and will go into the grain trade exclusively.

Henderson & Ingold, grain dealers of Spencer and Sioux Center, Iowa, have dissolved partnership. Mr. Henderson has removed to Lovejoy, Iowa, where he owns an elevator, and has engaged in the grain business at that place.

The S. Y. Hyde Elevator Company of La Crosse, Wis., is increasing the storage capacity of its lines of elevators and making improvements in the handling facilities. The company is also installing gas engines in nearly all its elevators.

All is not lovely with the Farmers' Alliance Elevator Company stockholders. The elevator at Hamilton was recently burned. A large number of stockholders are in favor of dividing the money that will be left after paying the indebtedness of the company and crying quits. The majority of the stock voted to rebuild, and there you have it. From the present

outlook there will be a lawsuit unless the principal stockholders make up their minds to purchase the holdings of the smaller ones, in which case the new house will, without doubt, be built.—Herald, Grand Forks, N. Dak.

Maynard Gunsul and Frank E. Smith, bankers of Gillett, Colo., have discontinued that business. Mr. Gunsul has engaged in the grain, hay and coal business at Cripple Creek, and Mr. Smith will conduct a grain, hay and coal business at Gillett.

The Loup Valley Grain Co. has been organized at Ord, Nebr., J. C. Rogers being elected president, and J. A. Patton, secretary-treasurer. For the present, at least, no grain will be shipped for anyone except those who hold stock in the company.

S. A. Fox, president of the Waukesha Grain & Produce Company of Waukesha, Wis., has sold his interest to the senior member of the firm, Mr. Smart. Frank Brimmer, who has been in the employ of the company, has purchased an interest in the business.

T. F. Marshall has purchased the Monarch Elevator at Oakes, N. Dak. He will remodel it throughout and replace the steam plant with a new gasoline engine. J. H. Coulter will have charge of the elevator and will do the buying for Mr. Marshall again this fall.

McCabe Bros. of Duluth, Minn., have awarded their contract to Tromanhouser Bros. for three grain elevators at points on the Colville branch of the Great Northern Railroad. One will have a capacity of 50,000 bushels and the other two a capacity of 25,000 bushels.

The O. W. Mills Grain Co. has completed its new grain elevator at Auburndale, near Toledo, Ohio. It was erroneously stated in the August number of the "American Elevator and Grain Trade" that the elevator was being built by the O. W. Mitts Grain Co.

The Richmond Elevator Co. together with Larry O'Neill, John Davey, and others of Emmet, Mich., have formed a stock company to erect an elevator at that place. When the house is completed it will be leased to the Richmond Elevator Co., who will conduct a grain business.

The Bad Axe Elevator at Bad Axe, Mich., owned by W. H. Carey & Co., has been remodeled and refitted with new machinery. A new stone foundation was placed under the entire building, and the storage room has been increased by new bins, with a capacity of 3,000 bushels.

The Canadian Pacific R. R. Co.'s new elevator at Owen Sound, Ont., will be completed about October 1. It will have a capacity of 800,000 bushels, and when finished the Canadian Pacific Railway will have facilities at Owen Sound for the storage of 1,050,000 bushels of grain.

Carrington, Hannah & Co. of Chicago, Ill., have completed a well equipped 50,000-bushel elevator at Henning, Ill., and a 25,000-bushel house at Manteno. Their country houses have also been overhauled and repaired. Louis Richards, with Carrington, Hannah & Co., had charge of the work.

W. N. Potter & Sons, dealers in grain and flour at Greenfield, Mass., are erecting an elevator at North Adams. The new elevator will be 125 feet long, 60 wide, with an awning 14 feet wide on the front, and there will be 10 bins. It will be completed about the middle of October.

There is a project on foot to erect a large transfer, clipping and cleaning elevator at Bloomington, Ill. W. D. Crist is at the head of the movement and it is proposed to form a company capitalized at \$100,000 to build the elevator, which will have a capacity of 225,000 bushels.

The directors of the Farmers' Elevator Company of Kenyon, Minn., held a meeting recently at which a dividend of 25 per cent. was declared. Since the company started two years ago it has paid for its elevator, declared two dividends of 25 per cent. each, and put away a surplus of \$6,000 to do business with.

The Commercial Elevator Co. has been incorporated at Duluth, Minn., with a capital stock of \$10,000, for the purpose of erecting, purchasing, leasing, maintaining and operating grain elevators, warehouses and storehouses, and to handle and deal in grains. The incorporators are Henry Taylor, Thomas J. Davis and J. W. Hannes, all of Duluth.

The Calumet Grain & Elevator Co.'s old elevator at South Chicago, Ill., has been entirely remodeled. The houses were originally built on the old Chase plan, with screw conveyors, upright shafting, gears, etc. These were all ripped out to make place for rope transmission and belt conveyors, making the house one of the most modern shipping houses in Chicago. Two large Monitor clippers have been added, and among other novelties is a belt conveyor running at an incline of 1 to 3½, carrying the grain from the low shipping bin in front of the elevator

to the top of the shipping bin on the river front. The steam plant was also overhauled, and the dust is now taken care of in the most approved manner. The improvements were carried out according to plans and specifications, and under the supervision of E. Lee Heidenreich, consulting engineer, of Chicago.

The Union Depot Elevator at St. Louis, Mo., which belongs to the new Consolidated Elevator Co., and which was dismantled by the tornado in May, 1896, has been repaired and put in operation. The elevator has always done a large business. It has supplied many of the big breweries with grain, and the same business policy will be pursued in the future.

The Northfield Farmers' Mercantile & Elevator Co. of Northfield, Minn., has completed a large and well equipped elevator at that place. The machinery is operated by a 10-horse power Webster Gasoline Engine, in an engine house built entirely separate from the elevator. The gasoline is fed from a fifty-gallon tank, which is itself outside the engine house, inclosed with brick.

The owners of the various elevators at Wilbur, Wash., have recently largely increased their capacity. H. M. Hansen has enlarged the capacity of his elevator to 50,000 bushels. M. E. Hay to 50,000 bushels, G. McAllister to 30,000 bushels, the Columbia River Milling Co. to 50,000 bushels. Wilbur boasts a larger grain storage capacity than any other town in the Palouse country.

The Brooks Elevator Company of Grand Forks, N. Dak., recently sold its entire line of elevators, thirty-five in number, with a capacity of 1,500,000 bushels, to the Duluth Elevator Company, recently organized, with headquarters in Minneapolis. Some of the stockholders of the new company are interested in the Globe Elevator Company, Duluth, and the two concerns will work together. The sale includes the entire equipment and stocks on hand of the Brooks Elevator. The houses are mainly on the line of the Great Northern and Northern Pacific. The original firm of Brooks Bros., who commenced business in Grand Forks nearly twenty years ago, and who established their first elevator with the advent of the Great Northern in 1879, was merged a few years ago into the Brooks Elevator Company. Their business has been extended and enlarged until it is one of the largest systems in the country. Messrs. Brooks Bros. will retain some stock in the new company, but will devote their entire attention to their grain commission business, which is also rapidly growing. The new company will have its headquarters in Minneapolis. A. McKinney will continue with the new company, as traveling superintendent, and will make Grand Forks his headquarters. Messrs. D. Somerville and C. E. Garvin, who have been connected with the general office of the Brooks Company at Grand Forks, will go to Minneapolis to accept positions with the new company. Wm. McKinney will remain with the Brooks Company.

EXPORTS OF BREADSTUFFS.

According to the report of the Bureau of Statistics, breadstuffs exported during eight months ending August 31 were valued at \$124,281,888, against \$98,369,866 for the same period of the preceding crop year; and the breadstuffs exported in August were valued at \$25,502,532, against \$14,411,407 in August, 1896.

The value of the different grains exported during the eight months ending with August, compared with the same time of 1896, were: Barley, \$4,176,293, against \$2,826,923; corn, \$39,465,163, against \$26,257,547; oats, \$6,717,968, against \$5,204,499; rye, \$2,819,074, against \$835,770; wheat, \$36,323,374, against \$27,456,032.

The amounts exported in August, compared with August, 1896, were: Barley, 1,991,161, against 1,604,726 bushels; corn, 14,766,585, against 11,022,177 bushels; corn meal, 70,463, against 26,819 barrels; oats, 4,723,172, against 2,867,515 bushels; oatmeal, 3,765,062, against 2,281,948 pounds; rye, 1,405,902, against 730,230 bushels; wheat, 14,246,403, against 6,693,004 bushels; wheat flour, 997,011, against 1,460,532 barrels.

For the week ending August 27, Chicago received 15,018,835 bushels of grain. The shipments during the same week aggregated 19,832,958.

The inspection of flaxseed at Chicago during August, September and October last year, when the movement was the largest, shows that 64 per cent. of the Northwestern seed weighed over 52 pounds to the measured bushel.

The American Warehousemen's Association will hold its 7th annual convention at Nashville, Tenn., October 20, 21 and 22. P. Thompson of New York City is secretary of the Association, while Chas. Rouzer, manager of the Nashville Warehouse & Elevator Co., represents the Association in Nashville, and has charge of the local arrangements for the entertainment of the guests.

Items from Abroad

Hungarians are reported to be buying large quantities of wheat in Southern Russia.

Austria, which in ordinary years is an exporter of grain, has been buying wheat in Antwerp.

Since the news of the failure of the oat crop in Ireland there have been more cable orders for oats than for a long time past.—Trade Bulletin, Montreal.

It will be a source of satisfaction to farmers to know that on Aug. 25, 1870 A. D., wheat sold in France at 25 cents a bushel. To-day it sells in France for \$1.15.

Argentine shipments of wheat for the week ending September 4 were none, as against 104,000 bushels for the corresponding week last year. Nor even then any corn shipments as against 1,824,000 bushels for the corresponding week last year.

A St. Petersburg cable says: Wheat crop estimated 60,000,000 bushels short; quality reported good. The wheat yield is 320,000,000 bushels. The rye crop is estimated 140,000,000 bushels short—560,000,000 bushels, against 700,000,000 bushels last year.

Dornbusch's Circular of Loudon claims that the European wheat crop this year is deficient 280,000,000 bushels, as compared with the production of 1896. The Mark Lane Express says that, allowing all that is claimed for America, the world's supply is 112,000,000 bushels short.

During July last Italy imported for home consumption and in temporary admission 233,000 quarters wheat and flour, exporting 6,000 sacks flour. The net importation in the twelve months ending July was 1,920,000 quarters compared with 4,160,000 quarters in the previous season.

Holland imported during the month of July 594,000 quarters wheat, and 93,000 sacks flour; the exports included 513,000 quarters wheat, and 10,000 sacks flour. The net importation in the season ending July was 1,623,000 quarters, compared with 2,330,000 quarters in the previous twelve months.

The French Minister of Commerce, M. Bouchere, addressing an agricultural meeting near Epinal, said the government had not declared that it would always maintain a customs barrier against wheat, even if the people's food supply was threatened, but the ministry wished first of all to favor French producers until it was proved that the supply of wheat was inadequate.

The total exports of wheat from all ports in the Argentine Republic during the first half of the present year amounted to 79,464 tons, against 48,470 tons for the first half year of 1896, and 915,940 tons for the first half year of 1895; 282,411 tons of maize during the first half of the present year, against 574,217 tons during the first half year of 1896, and 121,512 tons for the first half year of 1895.

The wheat crop shortage in France will necessitate large importations from America. A Paris special to a leading house says: "Apart from the speculative element connected with the recent rise in wheat in America, the hard fact stares France in the face that instead of the required 385,000,000 bushels, the harvest will bring in only 247,000,000 bushels, shortest crop since 1891, when we had 220,553,000 bushels."

Shipments of wheat to Europe from the chief ports of Argentina from January 1 to August 26, aggregated 212,500 quarters (of 480 pounds each), against 2,124,000 quarters during the same period of 1896, and 4,448,000 quarters during the same period of 1895. Argentina's maize shipments to Europe from May 1 to August 26 aggregated 571,000 quarters, against 2,115,500 quarters during the same period of 1896, and 1,811,500 quarters during the same period of 1895.

For the first time on our records we have added Austria-Hungary to the list of importers; hitherto the dual monarchy has been an exporter on balance of a half to one million quarters annually, but last week imports exceeded the exports by 10,000 quarters, and it is probably that while prices in Pesth and Vienna remain as high as they are at present, that considerable quantities of wheat will find their way over the frontiers notwithstanding the customs barrier of 6s. 6d. per quarter, both by the Danube and the Elbe.—Corn Trade News, August 31.

The imports of the United Kingdom during the 4 weeks ending August 28 amounted to 622,000 quarters of wheat (of 480 pounds each), against 1,073,000 quarters during the same period of 1896; 1,029,000 quarters of maize (of 480 pounds each), against 903,000 quarters during the same period of 1896; 295,000 quarters of barley (of 400 pounds each), against 401,000 quarters during the same period of 1896; 524,000 quarters of oats (of 304 pounds each), against 600,000 quarters during the same period of 1896; 80,200 quarters of beans (of 480 pounds each), against 60,000 during the same period of 1896; 60,300

quarters of peas (of 504 pounds each), against 55,000 quarters during the same period of 1896.

Germany imported in July 743,000 quarters wheat and 18,000 sacks flour; the exports of the two articles being 29,000 quarters and 36,000 sacks respectively. The net importation of the two articles in the season ending July was 6,030,000 quarters, compared with 6,610,000 quarters in the previous season.

OBITUARY

Edw. Beckmann, president of the E. Beckmann Commission Co., of St. Louis, Mo., is dead.

William S. Timmerman of St. Paul, Minn., died recently at 67 years of age. He was an old and well-known grain dealer of the Northwest.

Colonel Isaac Smith, at one time engaged in the grain and coal business at Selinsgrove, Pa., died at his home in Philadelphia, August 26. He was 70 years of age and had resided in Philadelphia since 1866.

Frederick Newton Cheney, who was treasurer of the Boston Chamber of Commerce for 23 years, died suddenly of heart failure August 18. He was engaged in the grain business almost his entire lifetime. He leaves a wife and two children.

John F. Parr, a well-known and highly esteemed citizen of Nashville, Tenn., died August 29. He had been a resident of Nashville for forty years, and during the greater part of that time he was engaged in the grain business as a member of the Frank Anderson Produce Company. He afterward engaged in the commission business.

Thos. B. Atkinson of Pine Bluff, Ark., died September 1. at Armstrong Springs, White Co., Ark., whither he had gone to regain his health. He was a member of the grain commission firm of Marsh & Atkinson. Deceased was a native of Mississippi, born in 1851, removed to Arkansas in 1865, and located in Pine Bluff in 1873.

Edward C. Chandler, who for about five years was general agent of the Great Northern Elevators, died at his home in Duluth, Minn., on August 20, of consumption. He was 38 years of age, and had spent nearly a year in California in the hope of recovering his health, but all hope being abandoned, he returned home a few days before his death to die among friends.

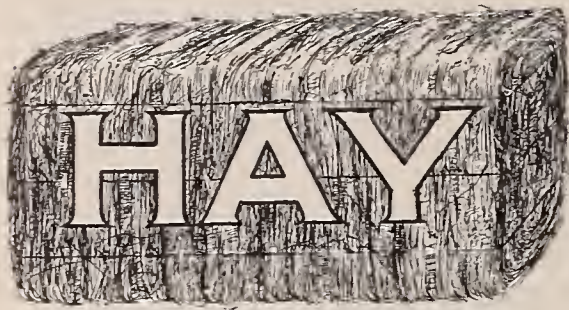
Phineas L. Underwood, one of Chicago's earliest Board of Trade men, died August 28 at his summer residence in Harwich, Mass. He was born at Harwich in 1836, and came to Chicago in the spring of 1855. Since then, until his retirement in January, 1894, he has occupied a prominent position in the marts of trade both of Chicago and Kansas City. Those left among his business associates, during the forty years of his active life on 'Change, speak in the highest terms of his business integrity and character.

James R. Hamlin, representative at St. Louis, Mo., of Swartz, Dupee & Co. of Chicago, died September 9 of a complication of Bright's disease and heart trouble. He met with a street car accident some time ago which prevented his attention to business for several weeks, and a short time after that suffered a sunstroke. He resigned his position with the Chicago firm about a month before his death, and had completed arrangements for engaging in the grain business at Lincoln, Nebr. He was taken down, however, and died before he left for that city.

J. Austin Brown, for many years prominently identified with the grain and live stock commission business of Chicago, Ill., and Milwaukee, Wis., died at his home at 5149 Cornell Avenue, Chicago, August 13. He was born at Norwich, N. Y., in 1831, and came West with his parents to Wisconsin when a lad of 14. He received an academic education in New York State, and again came West and engaged in the grain business. He removed to Chicago in the early eighties, and in 1886 became identified with the firm of Rosenbaum Bros. At one time he was a member of the grain commission firm of Chandler, Brown & Co. Mr. Brown enjoyed the esteem of a large circle of friends and was known as a loyal, upright business man.

The Union Elevator Co. of Minneapolis, Minn., is putting a fireproof roof and iron shutters on its grain elevator in Southeast Minneapolis. By reason of this it has secured a reduction on its insurance rate of 1/4 cent.

Consolidation of the state and the National Associations is not absolutely necessary to the success of the National Association, although such a move would strengthen it and permit it to do more effective work than it can do at present.



Alfred Lennox, dealer in hay at Wiscasset, Me., died recently.

H. T. Reed, hay dealer at Woodland Park, Colo., has sold his business.

The hay crop of Ontario, Can., is reported as being 600,000 tons greater than last year.

Laramie & Co., dealers in grain and hay at Montreal, Que., have dissolved partnership.

The firm of Lanetot & Forgues, dealers in grain and hay at St. Constant, Que., has been dissolved.

E. E. Foskett and L. N. Johnson have purchased E. J. Judkins' grain and hay business at Franklin, N. H.

Edmond Lefavre, hay dealer of St. Constant, Que., failed recently. The liabilities are estimated at \$23,000.

Clinton C. Campbell, who carried on a large business in hay and grain at Grant Park, Ill., has made an assignment.

John Wahl is erecting an elevator and hay building at Monroe, Mich., where he will engage in the grain, hay and coal business.

Alfred Cox's hay and straw press at Juliestown, N. J., was struck by lightning August 24, and was entirely consumed. Loss \$4,000.

Henderson, Johnston Co. of Pittsburg, Pa., have improved their large hay and grain warehouse by the addition of two new choppers.

R. A. O'Brien, hay and grain dealer of St. Hyacinthe, Que., who failed recently, is negotiating with his creditors regarding a settlement.

The United Kingdom imported 6,700 tons of hay during the 4 weeks ending August 28, against 7,600 tons during the corresponding period of 1896.

The Michigan Produce Co. of Lansing, Mich., has commenced the erection of a frame hay warehouse 28x100 feet. It will have a capacity of 500 tons.

A man who wouldn't be pleased to have the hay fever if he could catch it by kissing a pretty grass widow oughtn't be allowed to live in this world.

A barn at Fruitvale, Cal., containing 60 tons of hay was destroyed by fire August 21. The hay was owned by A. C. Fay, and was insured for \$9,000.

The average yield per acre of Prairie Hay throughout Manitoba is reported at 1.6 tons; the average yield per acre of cultivated grasses at 1.4 tons.

The hay press of Pitman & Stackhouse at Juliestown, N. J., was burned August 25. A large amount of hay was consumed. There was a small insurance.

Françoise Vezina and Moise Vesina have formed a partnership to engage in the grain and hay business at Montreal, Que., the firm name being Vezina & Frère.

The O. W. Mills Grain Co. of Toledo, Ohio, has leased the grain elevator owned by Joseph Waltz at Waltz, Mich. The company will buy grain and hay at that station during the winter.

Geo. H. Gaw of Union City, Mich., has admitted his sons to a partnership in his hay and straw business. The firm will carry on its business under the name of Geo. H. Gaw & Sons.

The firm of Watson & O'Brien has succeeded Watson & Hammer, dealers in grain, hay, produce, etc., at Dundee, N. Y., J. J. O'Brien having purchased the interest of J. W. Hammer.

The Phoenix Hay and Grain Co. of Phoenix, Ariz., has filed articles of incorporation. The company will buy and sell and carry on a general business in hay, grain and farm products and general merchandise.

Charles Wolohan has purchased the elevator and storehouse at Birch Run, Mich., belonging to Mauk & Hammer, dealers in grain, hay, etc., at Clio. Mr. Wolohan has remodeled the plant throughout, and expects to do a large business.

It is reported that shipments of hay by farmers in Wabash County, Ind., will be double the shipments of any former year. Shipments have been steadily increasing for the past five years. It is

said to be simply impossible for balers to obtain cars, and stocks are rapidly accumulating. The price has ruled at about \$5.50 per ton, the buyers baling the hay while the farmers deliver it at the railway station.

The exports of hay from all ports in the Argentine Republic during the first half of the present year amounted to 420,375 bales, against 402,760 bales for the corresponding period of 1896, and 139,849 bales for the corresponding period of 1895.

Pitt Bros. & Co., grain and hay receivers and exporters of Baltimore, Md., made an assignment recently. The firm was well known, and had many friends who hope that their present business embarrassment is only temporary. P. W. Pitt was one of the organizers of the National Hay Association, and held the office of secretary and treasurer for three successive years. The failure was attributed to the rapid rise in the wheat market.

The Inland Grain Co. has been incorporated at Minneapolis, Minn., for the carrying on of a general grain business, and the buying, selling, storing and handling of grain and other products; also the buying, selling, leasing, mortgaging and utilizing of estates in lands and other personal property of every description. The directors and officers are President, Ary E. Zonne; vice-president and general manager, John Fallis Linton; secretary and treasurer, Edgar T. Hanson. The capital stock is \$50,000.

REVIEW OF CHICAGO HAY MARKET.

The prices for hay ruling in the Chicago market during the last four weeks, according to the Trade Bulletin, were as follows: During the week ending August 21 the receipts of hay were 4,759 tons, against 3,919 tons the previous week. Shipments for the week were 197 tons, against 112 tons for the previous week. The market for Timothy hay ruled rather firm during the early part of the week. The offerings were only moderate, and a fair local demand existed. Later the arrivals became larger, and the demand not so urgent.

During the week ending August 28 the receipts were 4,966 tons, against 4,759 tons the previous week. Shipments for the week were 367 tons, against 197 tons for the previous week. The offerings of Timothy were quite heavy during the week, and the market ruled dull. The market for prairie hay was steady, the arrivals were only moderate, and all choice grades met with a ready sale. Sales of Choice Timothy ranged at \$8.50@10.00, outside for old; No. 1, \$7.50@9.00; No. 2, \$7.00@7.50; Not Graded, \$6.00; Choice Prairie, \$7.50@8.00; No. 1, \$7.25; No. 3, \$4.50@5.00. Rye straw sold at \$5.00@5.50.

During the week ending September 4 the receipts were 5,170 tons, against 4,966 tons the previous week. Shipments for the week were 273 tons, against 367 tons for the previous week. The market for Timothy and Prairie Hay ruled dull. The demand was light from all sources and arrivals were large. Prices declined about 50 cents per ton for Timothy, while Prairie Hay was fairly steady. Sales of Choice Timothy ranged at \$8.50@9.50; No. 1, \$7.50@8.50; No. 2, \$6.50@7.50; Not Graded, \$6.00@8.00; No Grade, \$6.00; Choice Prairie, \$7.50@8.00; No. 1, \$7.00@7.50; No. 2, \$5.50; No. 3, \$5.00; No. 4, \$4.00; Not Graded, \$7.25. Rye straw sold at \$5.25@6.00, and oat straw at \$3.00.

During the week ending September 11 the receipts were 5,482 tons, against 5,170 tons the previous week. Shipments for the week were 394 tons, against 273 tons for the previous week. There was a moderate inquiry for strictly Choice Timothy during the week, and as the offerings were small, a steady feeling prevailed. The arrivals of low and medium grades, however, were large and the market was very dull. Choice grades of Iowa and Kansas were in fair demand, while low grade and state hay was very dull. Sales of Choice Timothy ranged at \$8.50@9.50; No. 1, \$7.75@8.50; No. 2, \$6.50@7.50; No. 3, \$6.50; Not Graded, \$5.00@7.50; No Grade, \$5.00; Choice Prairie, \$7.50@8.00; No. 2, \$5.50@6.50; No. 3, \$5.00@5.50; No. 4, \$3.75@4.00. Rye straw sold at \$5.00@5.75, and oat straw at \$3.50@4.00.

Already the economy of internal combustion engines, whether operated with gas or with volatile hydrocarbons, is much greater than that of the steam engine and its inevitable boiler, and the lines along which gas engine improvement must be made are fairly well marked out. Of the energy contained in the gas, from 20 to 25 per cent. is now converted into effective form, the remainder being carried off with the cooling water, or rejected with the discharge gases, or in radiation. The most recent tests have shown the effective conversion of over 30 per cent. of the energy, most of this gain being from a reduction in the amount of heat rejected with the cooling water, and it is evident that a still greater economy could be attained if mechanical difficulties, such as cylinder wear, lubrication, etc., did not forbid, for the present, the use of higher cylinder temperatures.—Cassier's Magazine.

The EXCHANGES

Memberships in the Chicago Board of Trade have advanced \$300 in sixty days, and are now selling at from \$900 to \$950 net to the buyer.

The Buffalo News speaks of the Merchants' Exchange of Buffalo as being "devoted to the sales of grain and the burial of dead members."

A tempest was raised in the Cincinnati Chamber of Commerce over the charge by one member that other members were in collusion with city officials in the sale of grain to the city. A committee of investigation was appointed, but apparently found nothing to report.

There is a movement on foot for the establishment of a hay and grain board of trade at San Francisco, Cal. It is thought that a board of trade would bring about and maintain more satisfactory business relations than now exist between the wholesale and retail dealers.

The Chamber of Commerce of Milwaukee, Wis., has adopted the amendment respecting the weight test of certain grades of wheat, which was recommended by the board of directors some time ago. The amendment does away with the present test, requiring a fixed weight to the bushel for milling grades, and makes No. 2 Northern wheat deliverable on contract.

The annual election of officers of the Cincinnati Chamber of Commerce was held September 14. The members of the Board of Directors holding over to the incoming year are as follows: Vice-president, William L. Hunt; directors, Robert H. West, Edwin C. Gibbs, Oscar F. Barrett, Clarence H. Jones and J. W. Dunn. The two tickets in the field were the Regular and the Independent.

The so-called "Consolidated Produce and Stock Exchange" of Chicago, which claims to be running under a charter obtained from the state, was raided by John Hill Jr., chairman of the Civic Federation Committee on Gambling, with the help of a dozen constables on August 16, and again several days later. Mr. Hill, disregarding its high sounding title, treated it as a bucket shop. Wm. R. Hennig was the proprietor of the place. This is the concern whose agents were indicted in several Iowa counties some weeks ago.

At a recent meeting of the Winnipeg Board of Trade a letter was read from the Commissioner of Inland Revenue, asking the Board to take charge of the collection of grain samples in advance of the Standards Board meeting. The grain examiners consented to take charge of the samples, as a matter of courtesy to the department, and are now arranging for such collection. They wish it understood, however, that they in no way indorse the present system of selection of grain standards of Manitoba wheat. They have advised the department that the meeting should be held between September 15 and October 15, and that the chairman of the standards be authorized to name the particular date.

THE MARKETS

[We will be pleased to publish under this head short reviews of the conditions ruling in the different markets. Copy must reach us by the morning of the 14th of each month.]

Grain report of Jos. V. Ferguson & Co., New Orleans, September 11: HAY—The continued heavy receipts in this market, during the past week, and with the buyers taking hold sparingly, has tended to overstock the market and weaken prices, and all grades of hay are barely steady at quotations. This present increase in the receipts we believe will be only temporary, and we look for a firmer market toward the close of this month. We quote: Choice to Fancy \$14.00@14.50, Strict Prime or No. 1 \$12.50@13.50, Good Prime \$11.50@12.50, Ordinary \$10.00@11.00, Clover Mixed \$9.50@10.50. OATS—Receipts are only fair, and demand is quite active; very little stock is left in first hands. We quote: Choice Mixed (sacked) 26 cents, No. 2 25½ cents, Texas 24@25 cents. CORN—Moderate receipts with very good demand prevailing. Market steady and firm. We quote: Choice Yellow (sacked) 40 cents, Mixed 38@38½ cents, White 38 cents, dull and small demand. WHEAT BRAN—In fair request, good supply, 65@67½ cents.

Chicago banks have been sending on an average a million dollars a day to the West and Northwest for moving the crops.

Recent dust explosions among grain elevators have been the cause of bringing the attention of insurance companies to this class of insurance. Local agents at Chicago have been instructed to make a discrimination between the elevator which is used for storage and the cleaning elevator. The Underwriters' Association is preparing a new schedule, which will make a reduction of 20 per cent. in the insurance on warehouses operated under state licenses. Changes are also being considered in the rate on the elevator which is used as a cleaning house.

Fires - Casualties

L. B. Brinston's grain elevator at Neodesha, Kan., was burned on the afternoon of August 28.

The grain elevator at Eau Claire, Wis., received damages amounting to about \$50 from fire recently.

Filson's grain elevator at Osceola, Wis., was burned on the night of August 24. Loss \$3,000; fully insured.

Nye & Schneider's grain elevator at Nora, Nebr., was damaged by fire recently. The fire caught from the engine.

Stewart & Haynes' elevator at Schuyler, Nebr., burned on the night of September 7. The loss is estimated at between \$5,000 and \$10,000.

The grain elevator at Schell City, Mo., owned by J. A. Hahn, was burned on the afternoon of August 20. The fire was caused by a spark from an engine.

The elevator at Iowa City, Iowa, operated by Hill, Smith, Boone & Co., was burned on the morning of September 2. A large amount of grain was consumed.

The sides of the new grain elevator at Queens-town, Md., bulged out recently owing to insufficient bracing, and from 400 to 500 bushels of grain ran out into the river.

The grain elevator owned by Hight & McCoy at Dalton City, Ill., collapsed on the morning of August 26. It contained 50,000 bushels of corn, an amount far beyond its capacity.

The State Elevator Company's elevator at Hutchinson, Minn., was burned August 12. The walls were left standing. All papers and books were saved. One car of wheat was consumed.

The new grain elevator owned by P. D. Smith at St. Edward, Nebr., caught fire in the engine room on August 31. The flames were extinguished, however, before serious damage was done.

The large barn of W. D. Warner at Osman, Ill., was burned August 20. It contained 1,700 bushels of oats and 10 tons of hay. Loss \$3,000. Insurance \$1,000 on barn, and \$200 on contents.

The grain warehouses near Union Station, Ohio, owned by J. H. Douglas were struck by lightning at 8 p. m., August 24, and were burned. The warehouses were filled with corn and wheat. Loss \$5,000.

John D. Flanagan, a prominent grain dealer of Fort Dodge, Iowa, and ex-state representative, committed suicide on the night of August 26 by taking strychnine. Financial trouble was given as the cause.

The large barn of Charles Crawford, located near Mount Meridian, Va., was burned on the night of September 10, together with 1,500 bushels of wheat and 400 tons of hay. An insurance was carried of \$2,100.

The Farmer's Elevator at Hamilton, N. Dak., was burned August 12. Several hundred bushels of oats and barley, and a small amount of wheat were burned. The elevator was owned by a company of farmers. Loss \$5,000.

The Madison Elevator at Madison, Ill., owned by C. H. Spencer, and operated by John Tyson, was destroyed by fire late on the night of September 2. The building was 70 feet in height, and contained 45,000 bushels of wheat. Nothing but the office books was saved. Loss \$60,000.

The elevator owned by Abe Kaufman at Lyons, Ind., was burned at 3 a. m., August 29. It was supposed the fire was caused by a spark from a passing locomotive, as the flames were first seen on the roof. Loss \$1,000, with no insurance.

One of the bins in the Lillard Milling Company's elevator at Decatur, Tex., burst on the night of August 29 and about 5,000 bushels of grain was spilled upon the ground. The accident resulted from weak rods, which held the sides of the bin together.

Aaron Conn, a well-known broker of the Board of Trade of Detroit, Mich., committed suicide recently by strangling himself with a handkerchief in Belle Isle Park. He was caught short of wheat in a recent bulge, and it was thought the worry over this caused his act.

The grain elevator at Ohlman, Ill., owned by the A. C. Durdy estate, was burned on the morning of August 24. The fire is thought to have originated in the engine room. Loss on elevator \$10,000; fully insured. There was no insurance on the contents of the elevator.

James M. Treadway, a buyer for the grain and provision firm of John H. Wrenn & Co. of Chicago, Ill., was found dead near South Haven, Mich., recently, from a shot from his revolver. It was his custom to indulge in revolver practice, and it was thought he shot himself accidentally, as a paper pinned to a fence post a short distance from where he was

found was punctured with bullet holes, and he had evidently been practicing shooting at the time.

The grain elevator at Alexandria, Minn., owned by the Minneapolis & Northern Elevator Co. of Minneapolis, Minn., was burned at 3 a. m., August 31. The fire was caused by a stroke of lightning. About 3,000 bushels of wheat were consumed. Loss \$10,000; fully insured.

The grain elevator at Sanborn, Minn., owned by G. W. Van Dusen & Co., was destroyed by fire on the evening of August 17. It contained about 4,000 bushels of wheat. Sparks from a chimney started the fire. Loss \$7,000, fully insured. The elevator will be rebuilt.

The elevator at Muncie, Ill., operated by V. R. Delbey, and owned by B. B. Minor of Indianapolis, Ind., was burned at 5 a. m., August 15. It is supposed the fire started from sparks thrown on the roof by a passing engine. Power was furnished by a gasoline engine. About 7,000 bushels of grain were consumed. An insurance was carried of \$4,000.

The cylinder head of the engine at Hyatt & Rogers' grain elevator at Tom's Hill, Ind., blew out August 9, injuring the engine so badly that two weeks were consumed in making repairs. The engineer, John Spurgeon, was standing directly in front of the head just before the accident, but fortunately had stepped out of its way. It crashed through the walls of the building.

T. F. Musson's grain elevator at Audubon, Iowa, was burned August 29. Over 3,000 bushels of grain were destroyed. Mr. Musson secured a number of empty cars and resumed business. It is reported the elevator will be rebuilt. It was thought the fire was caused by incendiaries. Loss on elevator \$7,000; insurance \$4,000. Loss on contents \$4,000, with no insurance.

F. P. Rush & Co.'s grain elevator at Farmer City, Ill., was burned on the morning of September 4. The fire started in the dust room from an unknown cause. It was the second time the elevator was burned in five months. Alder & French of Lafayette, Ind., lost \$900 worth of corn, and farmers in the vicinity of Farmer City lost small amounts of grain. Loss on elevator \$6,000; insurance \$3,000.

The two grain elevators at Mountain Lake, Minn., one owned by H. P. Goertz of Mountain Lake, and one by E. G. Terwilliger of Minneapolis, Minn., were burned August 30. The fire is supposed to have been of incendiary origin. The elevator owned by E. G. Terwilliger of Minneapolis contained about 300 bushels of wheat and 600 bushels of oats. The other was empty. The loss is estimated at \$6,000, with a partial insurance.

The Santa Fe Elevator at Argentine, Kans., was damaged by fire at 1:30 a. m., September 4. The fire started in the dust room, and is supposed to have originated from spontaneous combustion. The city fire company responded promptly and assisted by the elevator employees the flames were extinguished. There was no fire about the building at the time the fire started, as the fire in the engine had been put out in the afternoon. Loss \$300.

John C. Maddy, of the firm of Churchill & Co. of Toledo, Ohio, was accidentally killed at 4:30 August 17 in the East Side Iron Elevator, of which he was manager. At the time of the accident he was standing in company with a number of others, watching a test of a new shovel drop, which was being put in position. The weight, of about 120 pounds, was suspended by an iron cable. While the little group below were watching it, the cable broke and the weight fell. Mr. Maddy was struck on the head and shoulder by the falling mass and hurled back against the clutch or cog wheel of some machinery below. Death was almost instantaneous. He was a member of the Produce Exchange, and his warm temperament and sunny disposition had won for him the close friendship of all his business associates. There was great sorrow felt on the floor of the Exchange at the news of his death. At noon of the day following the accident President Fred L. Reynolds called the Exchange to order, and Secretary D. B. Smith read a memorial, including a sketch of the life of Mr. Maddy. He was 35 years of age, and a man of excellent business judgment. He was born at Moscow, Ohio, in 1862, and went to Toledo in 1881. He had been a member of the Produce Exchange since that time. A wife and two children survive him.

The large grain elevator of the Davenport Glucose Works at Davenport, Iowa, was burned at 8:45 a. m., August 20. The fire started from a dust explosion. The north and south walls of the elevator were blown outward and fell in crumbling heaps of brick and mortar. The explosion was thought to have been due to spontaneous combustion. There were no lights, either electric or other kind, about the elevator. The building was empty, with the exception of 20 tons of dry feed, and 681 bushels of corn that had just been placed in the hopper. Three men, John Hamm, John Rapp and Henry Holm, were at work in the elevator cupola when the ex-

plosion occurred. Holm escaped by jumping from the window of the cupola and running to the main building, which adjoined the elevator on the east. He managed to mount on this building and thence descended to the ground. Rapp and Hamm ran to the fire escape, which ascended the north wall of the building. A second explosion, however, detached a part of this wall, and the fire escape was hurled out of their reach. By this time the flames had shut off retreat to the main building, and they were left clinging to the wall. Some bricks gave way and Rapp fell, soon followed by Hamm, who jumped to avoid the heat. Both men were crushed almost out of human form, but both survived the fall a short time. A farmer and his daughter were caught by the falling wall and sustained injuries, from which they died. The loss on the elevator was estimated at from \$10,000 to \$15,000. Insurance \$13,000. The elevator will be rebuilt.

PERSONAL

Robt. Zachow has taken charge of the Greenleaf Elevator at Litchfield, Minn.

Lon Freeman has taken charge of the new grain elevator at Waynetown, Ind.

J. M. Embler of Hiawatha, Kans., has been appointed weighmaster at Kansas City.

C. McD. Robinson has been appointed chief grain inspector for the Board of Trade of Galveston, Texas.

Chester Bateman, formerly of Ludden, N. Dak., has taken charge of the grain elevator at Guelph, N. Dak.

William Boothroyd has engaged as grain buyer for the Northwestern Elevator Company at Dakotah City, Iowa.

Willard Huyck of Mitchell, S. Dak., has gone to Springfield to buy grain for the Spencer Grain Co. at that place.

J. H. Loen has taken charge of the grain elevator at Fosston, Minn., owned by the Jacobi Elevator Co. of Duluth.

E. Aldrich of Marshalltown, Iowa, has taken charge of the Speucer Grain Company's elevator at Wesley, Iowa.

Chas. E. Metz has taken the position of grain buyer for C. W. Tracey, and will operate between Tekoa and Starbuck, Wash.

George E. Compton, formerly assistant chief grain inspector at Chicago, has been appointed chief inspector at East St. Louis, Ill.

John Chisholm has been appointed manager of F. H. Peavey & Co.'s Pacific Coast line of elevators with headquarters at Portland, Ore.

Albert Carpenter, formerly agent of the Lake Erie & Western at Perdue, Ill., is conducting the business of the Elliott Grain Company at Elliott, Ill.

H. S. Patterson, formerly engaged in the grain business at Portage la Prairie, Man., has removed to New York City, where he will represent a grain firm of Winnipeg.

John Ward, a former prominent grain merchant and business man, well known throughout Southern Illinois, was married August 26 at Benton, Ill., to Miss Anna Ensinger.

W. G. Ainsworth, formerly manager of elevators A1 and A2 of Minneapolis, Minn., has been appointed representative of the Weare Commission Co. of Chicago, Ill., on the Minneapolis Exchange.

Frauk R. Pettit, representative on the Minneapolis Exchange of the Weare Commission Co. of Chicago, Ill., has been transferred to the management of a branch which the company has opened in New York City.

Seltzer Orr of Peoria, Ill., has taken charge temporarily of the grain elevator of T. A. Grier & Co. at Lafayette, Ind. When the new Burlington Elevator at Peoria is completed he will resume his old position there.

S. A. Iverson, who has occupied the position of assistant in the Minneapolis & Northern Elevator at Devil's Lake, N. Dak., for a number of years, has been transferred to Thompson, where he will act as agent for the same company.

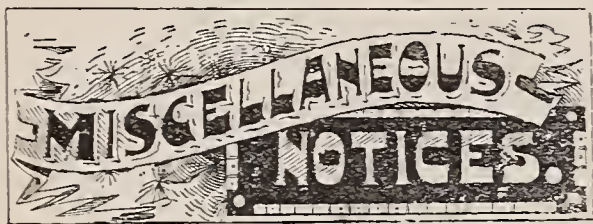
H. H. Newell, manager in Central Illinois with headquarters at Colfax, for the Middle Division Elevator Co. of Chicago, has removed his headquarters to Bloomington. He has recently had six stations south of Bloomington added to his territory, and the enlargement of the business and the extent of territory covered made the change necessary.

The Jumbo Elevator of the P., C. & St. L. Railway at Cincinnati has proved a benefit all around, both to shippers and railways.

RECENT SALES OF ELEVATOR MACHINERY.

We take the following from an extensive list of elevator and mill machinery sold by the Barnard & Leas Mfg. Co. of Moline, Ill., during the month of August:

E. H. Pease Mfg. Co., Racine, Wis., one No. 1 Cornwall Corn Cleaner. W. H. Dunn, Mt. Comfort, Ind., one No. 2 Little Victor Corn Sheller and Cleaner. Waterous Engine Works Co., Winnipeg, Man., one No. 4 Elevator Separator. W. W. Stephens & Co., Chicago, Ill., one No. 2 Little Victor Corn Sheller and Cleaner. Savage & Love Co., Rockford, Ill., one No. 1 Little Victor Corn Sheller and Cleaner. Natchez Oil Co., Natchez, Miss., one cottonseed hull packer. Crawford & Mortimer, Muburn, Iowa, one No. 1 Cornwall Corn Cleaner, one No. 1 Victor Corn Sheller. S. J. Brown, Liberty, Mo., one No. 2 Cornwall Corn Cleaner. George Bridenbucker, Bentonville, Ind., one No. 0 Victor Combined Sheller and Cleaner. York Foundry & Engine Works, York, Nebr., one No. 1 Cornwall Corn Cleaner. M. E. Miner & Co., Cedar Rapids, Iowa, one No. 3 Victor Corn Sheller. Des Moines Mfg. and Supply Co., Des Moines, Iowa, one No. 1 Victor Corn Sheller, one No. 1 Corn Cleaner, one 8-inch Seeley Turn Head. W. T. Payne Mill & Supply Co., Louisville, Ky., one No. 2 Barnard Receiving Separator. G. W. Wagoner, Stony Ridge, Ohio, one No. 1 Cornwall Corn Cleaner. Glucose Sugar Refining Co., Davenport, Iowa, one No. 4 Cornwall Corn Cleaner. Butterfield & Struby, Denver, Colo., one No. 3 elevator separator. John Simison, Romney, Ind., one No. 3 Victor Corn Sheller, one No. 2 Cornwall Corn Cleaner. Crab & Reynolds, Waynetown, Ind., one No. 3 Victor Corn Sheller, one No. 2 Cornwall Corn Cleaner, one No. 35 Barnard Special Grain Separator. E. R. Ulrich & Sons, Pawnee, Ill., one No. 2 Victor Combined Corn Sheller and Cleaner. Preble & Lane, Cuba, Kan., one No. 2 Victor Corn Sheller, one No. 2 Cornwall Corn Cleaner. The Wolf Co., Chambersburg, Pa., one No. 000 Little Victor Corn Cleaner. G. N. Harding, Lacona, N. Y., one Cornwall Corn Cleaner. Fairbanks, Morse & Co., Omaha, Nebr., one No. 1 Victor Corn Sheller, one No. 1 Cornwall Corn Cleaner. H. C. Clark, Colfax, Ind., one No. 2 Victor Corn Sheller, one No. 2 Cornwall Corn Cleaner. Jos. Wagner Mfg. Co., San Francisco, Cal., one No. 3 warehouse separator.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

SMALL ELEVATOR WANTED.

I want to rent a small elevator in Central West. Must be in good grain and hay country for making shipments East. Address

A. B., care Gibbs & Bro., No. 1 So. Front St., Philadelphia, Pa.

FOR EXCHANGE.

Good farm lands in Eastern South Dakota, well located and within 80 miles of Minnesota line, for good elevator located in Illinois or Iowa. Address

LOCK BOX 407, Delavan, Ill.

PARTNER WANTED.

To take half interest in established good paying country grain business in Central Illinois. From \$3,000 to \$5,000 required. Experienced grain man wanted, German preferred. Would sell all if wanted. Address

B. B., Box 9, "American Elevator and Grain Trade," Chicago, Ill.

ILLINOIS ELEVATOR FOR RENT.

Elevator in the best grain region of Illinois for rent. The best built and most complete house in this part of the state, on the C., C. & St. L. R. R. (Big Four). Has ear corn and grain dump, office scales, hopper scales, one run of 3½-foot French burrs, sheller and cleaner, 30-horse power engine, etc. Must be seen to be appreciated. Handled 75,000 bushels of grain in December and January; is running now. Possession given March 1, 1897. Address

LEVI RICHNER, Mansfield, Ill.

SUPERINTENDENT WANTED.

We want a superintendent for our transfer elevator. Must be man of good executive ability, thoroughly reliable and experienced in elevator work; knowledge of feed grinding desirable. Address

EASTERN, Box 9, "American Elevator and Grain Trade," Chicago, Ill.

STEAM MILL OR ELEVATOR WANTED.

I want to lease a steam mill of 80 or 100 barrels' capacity, or steam elevator plant on good line of railroad into Chicago. Want premises by November 1. Town not less than 2,000, in Illinois, Michigan or Wisconsin. Address

V. Box 9, "American Elevator and Grain Trade," Chicago, Ill.

POSITION AS SUPERINTENDENT WANTED.

Position wanted as superintendent or foreman of grain elevator, either large or small house. Thoroughly understand handling, grading and mixing of grain. Have had ample experience, and can furnish good references. Address

SUPERINTENDENT OR FOREMAN, Box 8, "American Elevator and Grain Trade," Chicago, Ill.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

ATLAS ENGINE FOR SALE.

For sale, one 70-horse power Atlas Automatic Engine, in perfect order. Been run only three years. Address

SHANNON & MOTT CO., Des Moines, Iowa.

FEED MILLS FOR SALE.

For sale, a number of Bowsher's Feed Mills, nearly new. We bought this mill to grind hay, and find it will not do it satisfactorily, so offer it for sale cheap. It is a splendid feed mill. Inquire of

E. W. LABOMBARDE & CO., Nashua, N. H.

SECOND-HAND MACHINES CHEAP.

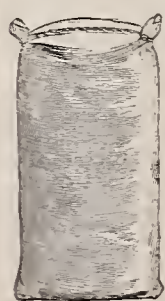
One No. 3 Barnard & Leas Warehouse Dustless Wheat Separator and one No. 5 Excelsior Oat Clipper, Separator and Grader Combined; both machines in good condition, about as good as new, for sale cheap. Address

IRVING W. FOX, Rochester, Minn.

SEVEN ILLINOIS ELEVATORS.

Seven elevators for sale. All in good condition; six of them have gasoline engines, one steam engine. Four are on the C., B. & Q. R. R., three on the C., R. I. & P. R. R. Good corn and oats section. All within 100 miles of Chicago. Address

A. K. KNAPP, Minooka, Ill.



GRAIN BAGS—BURLAPS.

All kinds of Bags,
New and Second Hand.

ORDERS FILLED PROMPTLY.

W. J. JOHNSTON,

Factory and Office,
182 Jackson Street, CHICAGO.

E. R. Ulrich & Sons,
SHIPPERS OF
WESTERN GRAIN,

ESPECIALLY

High Grade White and Yellow Corn.

Elevators through Central Illinois on Wabash Ry., Chicago & Alton Ry., C. P. & St. L. Ry., and St. L., C. & St. P. Ry.

Main Office, 6th Floor, Illinois National Bank Building,

SPRINGFIELD, ILLINOIS.

Write for Prices Delivered.

ROOFING AND SIDING.

DOES YOUR ROOF LEAK?

How to Prolong the Life of an Old Roof.

If an old leaky tin, iron or steel roof, paint it with Allen's Anti-Rust Japan. One coat is enough; no skill required; costs little; lasts long.

The name describes it; proof against water, time, climate, and fumes of every description. Stops leaks, and prolongs the life of an old roof.

If you want the evidence write us.

To be returned at our expense if not satisfactory.

ALLEN ANTI-RUST M'FG COMPANY,

413 Vine St., Cincinnati, O.

The Garry Iron and Steel Roofing Co.,

168 MERWIN STREET, CLEVELAND, O..

MANUFACTURES



Steel Roofing,
Corrugated Iron,
Siding and Metal
Ceiling.

SEND
FOR CATALOGUE



DURABLE—EASILY APPLIED.

This roofing is manufactured from natural Trinidad asphalt materials, and will not dry up and become brittle under exposure to the weather as coal tar roofings do. Send for free sample of roof 12 years old, with circular and price list to

WARREN CHEMICAL & MFG. CO.,
56 Fulton St., New York, U. S. A.



Write us for Catalogue and Low Prices on best

STEEL ROOFING, CORRUGATED IRON, ETC.

We are large manufacturers of these goods and can save you money.

SYKES STEEL ROOFING CO.,
611 So. Morgan St., Chicago, Ill.,
and Niles, Ohio.



IRONTON, OHIO.

SUMMER Excursion

Tickets to the resorts of Wisconsin, Minnesota, Michigan, Colorado, California, Montana, Washington, Oregon and British Columbia; also to Alaska, Japan, China and all Trans-Pacific Points, are now on sale by the CHICAGO, MILWAUKEE & ST. PAUL RAILWAY. Full and reliable information can be had by applying to Mr. C. N. SOUTHER, Ticket Agent, 95 Adams Street, Chicago.

COMMISSION CARDS.

[We will not knowingly publish the advertisement of a bucket-shop keeper or irresponsible dealer.]

J. J. BLACKMAN ASSOCIATED WITH **L. E. BUNKER**

COMMISSION MERCHANT.

Flour, Grain, Hay, Feed, Beans, Peas, Lentils, Seeds, Corn Goods, Etc.

274 Washington Street, - - NEW YORK.

F. W. RUNDELL. ESTABLISHED 1876. J. E. RUNDELL.

W. A. RUNDELL & CO.,

GRAIN AND SEED MERCHANTS.

MEMBERS TOLEDO PRODUCE EXCHANGE.

4 PRODUCE EXCHANGE, TOLEDO, OHIO.

Grain, Clover and Timothy Seed, Mill Feed, Baled Hay and Straw, Beans. We solicit orders and consignments. Will buy your track or delivered Toledo. We also solicit orders for the purchase and sale of futures in grain and clover seed.

H. B. SHANKS. Established 1873. S. H. PHILLIPS.

Shanks, Phillips & Co.,

COMMISSION MERCHANTS,

HAY, CORN, OATS, BRAN, CHOPS, FLOUR AND CORN MEAL.

306 Front St., Memphis, Tenn.

Refer to Union and Planters' Bank. Cash advances on B. of L.



F. H. PEAVEY & CO.,

Minneapolis,

GRAIN RECEIVERS.

Consignments Solicited.

MILLING WHEAT A SPECIALTY.

ESTABLISHED 1867.

Reference: DUQUESNE NAT. BANK.

**Daniel McCaffrey's Sons,
HAY, GRAIN AND FEED**

CONSIGNMENTS SOLICITED.

PITTSBURG, PA.

SHIP YOUR GRAIN

—TO—

P. B. & C. C. MILES,

COMMISSION MERCHANTS,

PEORIA, ILL.

Established 1875.

LIBERAL ADVANCES
QUICK RETURNS.

REFERENCES:—Commercial Nat. Bank, Peoria Savings, Loan & Trust Co., Peoria.

M. F. BARINGER,

....SUCCESSOR TO....

J. R. TOMLINSON & CO.

...GRAIN AND MILL FEED...

416-418 Bourse Bldg., Philadelphia, Pa.

Correspondence with millers and grain dealers solicited. Sight draft with bills of lading attached honored on all shipments.

HENRY WOOLNER,

GENERAL

Grain Commission Merchant,

PEORIA, ILL.

BARLEY A SPECIALTY.

Liberal Advances on Consignments. Quick Returns. Correspondence solicited. References: German American National Bank, Merchants National Bank.

Leavitt, Sanborn & Co.,

704 Chamber
of Commerce,
Boston, Mass.

HAY COMMISSION

Our market needs the BEST HAY. There is no money to be made in poor goods. Correspondence solicited.

Reference: T. G. Hiler, Cashier the Faneuil Hall National Bank, Boston.

COMMISSION CARDS.**Martin D. Stevers & Co.**

Commission Merchants,

212 RIALTO BUILDING, - CHICAGO.

Established 1864.

We make a specialty of selling by sample

Barley, Wheat, Bye, Oats, Corn, Flax and Timothy Seed.

Grain, Seeds and Provisions for future delivery bought and sold on margins.

LEMAN BARTLETT.

O. Z. BARTLETT.

L. Bartlett & Son,

GRAIN AND PRODUCE

COMMISSION MERCHANTS.

BARLEY A SPECIALTY.

Room 23 Chamber of Commerce Bldg
Milwaukee, Wis.

Careful attention given to orders from Brewers, Maltsters and Millers

A. R. CLOUGH,

MILLER'S AGENT,

GRAIN AND MILL FEED,

Board of Trade Rooms, Manchester, N. H.

Letters promptly answered. All sales direct.
I want a good Toledo corn account.

COLLINS & Co.,

STRICTLY COMMISSION

Grain, Hay and Mill Feed.

CINCINNATI, OHIO.**E. L. ROGERS & CO.,**

ESTABLISHED
1863.

COMMISSION
MERCHANTS,

RECEIVERS AND EXPORTERS

GRAIN, Flour, Seed, Hay and Straw,

358 Bourse Building, PHILADELPHIA, PA.

Liberal advances made on consignments. Market reports furnished gratuitously on application. Correspondence solicited.

References: { Corn Exchange National Bank.
Manufacturers National Bank.
Merchants National Bank.

J. A. MANGER & CO.,

Grain, Hay and Seed

Commission Merchants

Office and Warehouse: 218 Patterson Street,

BALTIMORE, MD.

LIBERAL ADVANCES ON CONSIGNMENTS.

REFERENCE: Third National Bank, Baltimore, Md.

ESTABLISHED 1879.

LEDERER BROS.,**GRAIN and SEED**

Commission Merchants,

BALTIMORE, - - MD

We give careful attention to every shipment, are always prepared to make cash advances on consignments. We make a specialty of handling spot goods, which we either sell after arrival or hold if requested. We solicit your trade as we do a strictly commission business. REFERENCES: Merchants National Bank, Baltimore, Md., and the Commercial Agencies.

COMMISSION CARDS.

ESTABLISHED 1865.

L. EVERINGHAM & Co.,

Commission Merchants.

ORDERS AND CONSIGNMENTS SOLICITED.

GRAIN AND SEEDS OF ALL KINDS

For Cash and Future Delivery.

Suite 80 Board of Trade, - - CHICAGO, ILL.

L. F. Miller & Sons,

RECEIVERS AND SHIPPERS OF

GRAIN, FEED, SEEDS, HAY, ETC.

OFFICE 2933 N. BROAD ST., PHILADELPHIA, PA.

CONSIGNMENTS SOLICITED.

ELEVATOR AND WAREHOUSE, GERMANTOWN JCT., P. R. R.

References: { Manufacturers National Bank, Philadelphia, Pa.
Union National Bank, Westminster, Md.

EDWARD P. MERRILL,

Millers' Agent.

Flour, Grain and Mill Feed.

OFFICE:

21-2 Union Wharf, PORTLAND, MAINE.

No consignments wanted. I want a Feed Account from a
Letters Promptly Answered. good Winter Wheat Mill.

Rosenbaum Brothers,**COMMISSION MERCHANTS**

Receivers and Shippers.

GRAIN AND SEEDS.

ROOM 77 BOARD OF TRADE BUILDING,
CHICAGO.

J. F. ZAHM.

F. W. JAEGER.

F. MAYER.

ESTABLISHED 1879.

J. F. ZAHM & CO.,

GRAIN AND SEEDS,

TOLEDO, OHIO.

SEND FOR OUR RED LETTER. . .

TOLEDO, OHIO.

BUFFALO, N. Y.

CHURCHILL & CO.,

GRAIN MERCHANTS.

TOLEDO IS THE BEST MARKET FOR WINTER WHEAT AND CLOVER SEED. BUFFALO FOR CORN AND OATS.

Ask us for bids your track for grain based on Toledo or Buffalo weights and grades. We will sell grain on commission in either market and make liberal advances.

Correspondence Solicited.

GEO. N. REINHARDT & CO.

MELROSE STATION, NEW YORK CITY.



We sell on Commission and buy direct,

HAY, GRAIN AND FEED.

Storage capacity 8,000 bales, 30,000 bushels
Let us know what you have to offer.

J. B. ALLFREE MFG. CO.

INDIANAPOLIS, INDIANA.

BUILDERS OF —

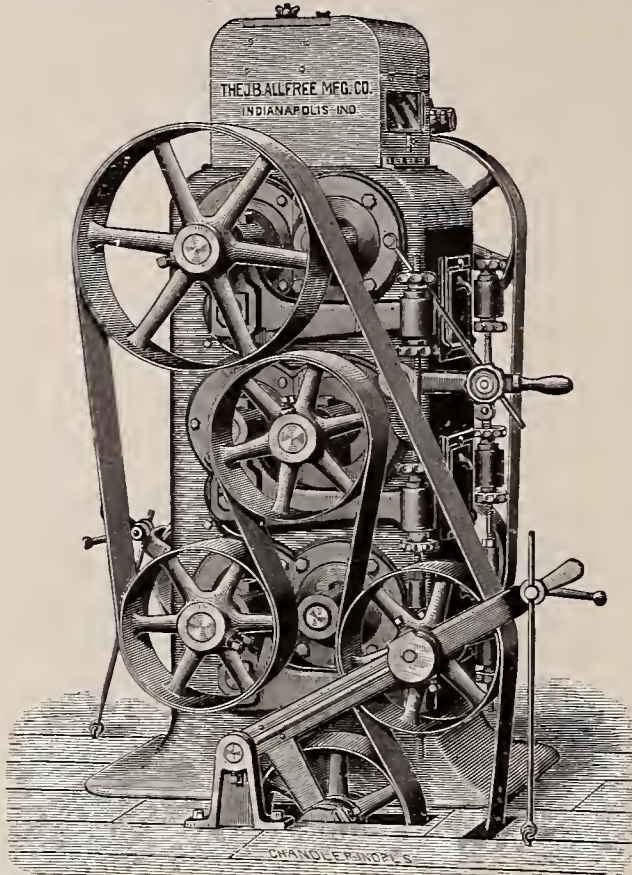
THE HIGH MILL SYSTEM,

An Improved Milling System,

Makes Better Flour, Saves Power,
Room and Labor.

Corn Shellers,
Automatic Engines,
Cornmeal Plants.

Describe wants and write for
Circulars.



MANUFACTURERS OF —

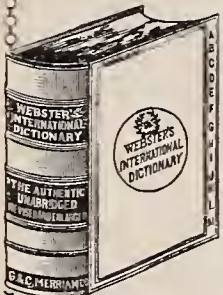
FLOUR-MILL and ELEVATOR MACHINERY.

Improved Rope Drives,
Shafting and Pulleys,
Corn and Feed Rolls,
Aspirating Meal Bolts,
Hominy Separators,
Grain Separators.

SPECIAL PRICES UPON APPLICATION.

Webster's International Dictionary

Successor of the "Unabridged."
The One Great Standard Authority,
So writes Hon. D. J. Brewer,
Justice U. S. Supreme Court.



Standard
of the U. S. Gov't Printing
Office, the U. S. Supreme
Court, all the State Su-
preme Courts, and of near-
ly all the Schoolbooks.

**Warmly
Commended**
by State Superintendents
of Schools, College Presi-
dents, and other Educators
almost without number.

Invaluable
in the household, and to
the teacher, scholar, pro-
fessional man, and self-
educator.

THE BEST FOR PRACTICAL USE.

It is easy to find the word wanted.
It is easy to ascertain the pronunciation.
It is easy to trace the growth of a word.
It is easy to learn what a word means.

The Chicago Times-Herald says:—
Webster's International Dictionary in its present
form is absolute authority on everything pertaining
to our language in the way of orthography, ortho-
epy, etymology, and definition. From it there is no
appeal. It is as perfect as human effort and scholar-
ship can make it.—Dec. 14, 1895.

GET THE BEST.

Specimen pages sent on application to
G. & C. MERRIAM CO., Publishers,
Springfield, Mass., U.S.A.

The Illinois Seed Co.

ALEX. RODGERS,
PRESIDENT.

SEED MERCHANTS,

CORNER 15TH AND JOHNSON STREETS, STATION "H," CHICAGO.

If you wish to buy or sell field seeds correspond with us.

ESTABLISHED 1872. + IN GENERAL USE.

The Robinson TELEGRAPHIC CIPHER

(TRADE MARK REGISTERED.)

Saves 80 Per Cent. Your Telegraph Bill.

Revised Edition now ready. Fifteen additional
pages of Railroads, Grades of Grain, Mill Feed,
Hay, etc., and phrases to meet present demands
of the trade, inserted. Cipher words and phrases
in previous editions retained the same. No ad-
vance in price. Leather and gilt, \$2.00. In cloth,
\$1.50. S. L. ROBINSON, 505 Rialto Bldg., Chicago.

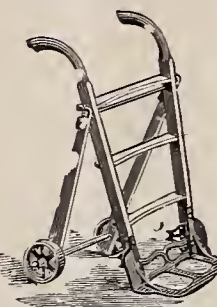
DUST! DUST! Gibbs' Patent Dust Pro-

jector is invaluable to oper-
atives in every industry
where dust is troublesome.
It has been thoroughly
tested for many years in
every kind of dust and is the
only reliable protector
known. Perfect ventila-
tion. Nickel plated Pro-
jector \$1, postpaid. Circu-
lars free. Agents wanted.

Gibbs Respirator Co.,
30-36 La Salle Street, • CHICAGO.



Trucks and Sack Holders.



Improved Trucks

Combination Truck
and Step-Ladder, and
Single Trucks, Sack
Holders and Stand.

Best Boiler Com-
pound recipe, the right
to manufacture and
use, with instructions
Price..... \$1.00
Combination Truck
and Step-Ladder and
Single Truck for.. \$3.00
Prices for larger
number given. Write
for prices and circulars.
Circulars free.

PEERLESS MFG. CO., Springfield, Ohio.

Dust Protector.

The "Perfection" has
an improved Automatic
Valve, which gives per-
fect protection and ven-
tilation. Neatest. Hand-
iest. Best.

Nickel plated protector,
postpaid, \$1. Agents
wanted. Address
H. S. COVER, So. Bend, Ind.



A GRAIN SPOUT

That will load cars without shoveling.
It is worth its weight in gold. It will
save you in labor all it costs in less than
a month.



Send for Prices to

H. SANDMEYER & CO.,

...PEORIA, ILL...

PRICE REDUCED 66 PER CENT.

Cawker's American Flour Mill and Elevator Directory.

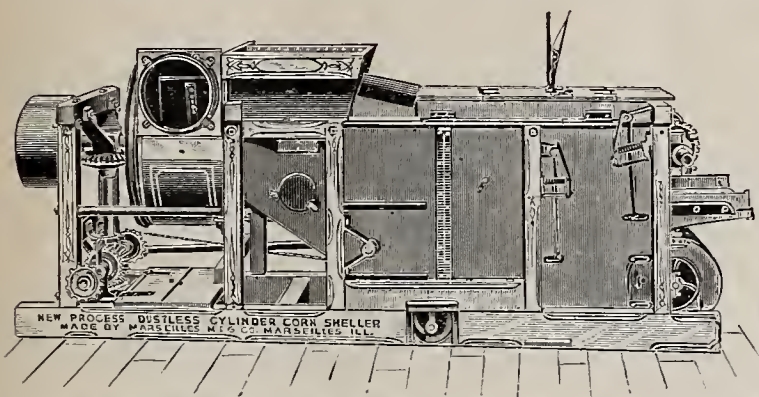
FORMER PRICE, \$10.00.

PRESENT PRICE, \$3.50.

We have a limited number of Cawker's American Flour Mill and Elevator Directory on hand, which we will
sell at \$3.50 per copy. They will not last long at this price, so speak quick if you want one. We will
furnish a copy of the Directory and a year's subscription to the AMERICAN ELEVATOR AND GRAIN TRADE
for \$4.50.

Address **MITCHELL BROS. CO.,** 184 and 186 Dearborn St., CHICAGO, ILL.

The New Process Warehouse Corn Sheller.



Something New

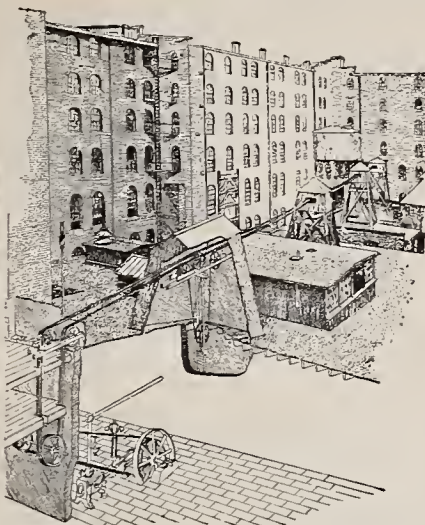
The
Latest
Improvements

Specially built for
the Elevator and
Grain Trade.

A NEW PROCESS OF SHELLING CORN.

Some of the special features are: An Adjustable Cylinder, White Iron Shelling Parts, Spiral Shelling Head, Double Suction and Blast Fans, Positive Screw Feed, no Clogging, no Grinding of Corn, Cobs Left in Good Shape for Fuel, no Waste of Grain or Power. Address

MARSEILLES MFG. CO., MARSEILLES, ILL.



150 H. P. Outdoor Rope Drive Installed
1891 at Plant of Michigan Stove
Co., Detroit, Mich.

MANILA ROPE POWER TRANSMISSIONS

OF ANY HORSE POWER DESIGNED
AND ERECTED.

SHAFTINGS, PULLEYS, GEARINGS, SHAFT
BEARINGS, FRICTION CLUTCHES CARRIED IN
STOCK.

GRAIN TRIPPERS, CAR MOVERS, GRAIN
SHOVELS, WAGON DUMPS, ELEVATOR BUCK-
ETS, BOOTS AND BOLTS.

LINK-BELT MACHINERY CO.,

ENGINEERS, FOUNDERS, MACHINISTS,
CHICAGO, U. S. A.

Conveying, Elevating and Power-Transmitting Machinery

H. W. CALDWELL & SON CO.

SPECIALTIES FOR MILLS AND GRAIN
ELEVATORS.

GENERAL MACHINISTS,

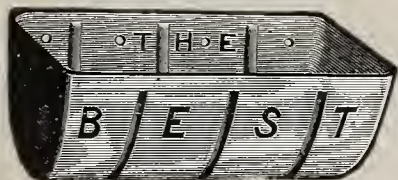
127, 129, 131, 133 West Washington St.

CHICAGO.

CALDWELL

STEEL CONVEYOR.

Manufactured exclusively by us at Chicago, with latest improvements.



CALDWELL CORRUGATED SEAMLESS
STEEL ELEVATOR BUCKETS.

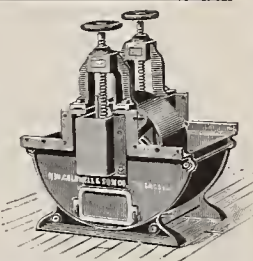


LINK BELTING.
SPROCKET WHEELS.
COTTON BELTING.
RUBBER BELTING.
LEATHER BELTING.
BELT CLAMPS.
POWER GRAIN SHOVELS.
ELEVATOR BOLTS.
ELEVATOR BUCKETS.
CONCRETE MIXERS.

FRICTION CLUTCHES.
JAW CLUTCHES.
COUPLINGS.
FLEXIBLE SPOUTS.
GEARING (all kinds).
GRAIN SCOOPS.
ELEVATOR BOOTS.
COGSWELL MILLS.
HANGERS.
PERFORATED METALS.

PILLOW BLOCKS.
IRON PULLEYS.
WOOD PULLEYS.
SHAFTING.
SET COLLARS.
SWIVEL SPOUTS.
TAKE-UP BOXES.
TURN HEAD SPOUTS.
WIRE CLOTH.

Elevator
Boot.



JEFFREY



Roller, Steel and Special Chains

FOR ELEVATING AND CONVEYING MACHINERY

FOR HANDLING MATERIAL OF ALL KINDS.

POWER TRANSMISSION MACHINERY.

COAL MINING MACHINERY.

Wire Cable
Conveyors.

For long and
short distance
conveying.

THE JEFFREY MFG. CO. 163 Washington St.
Columbus, Ohio. NEW YORK.
Send for Catalogue.

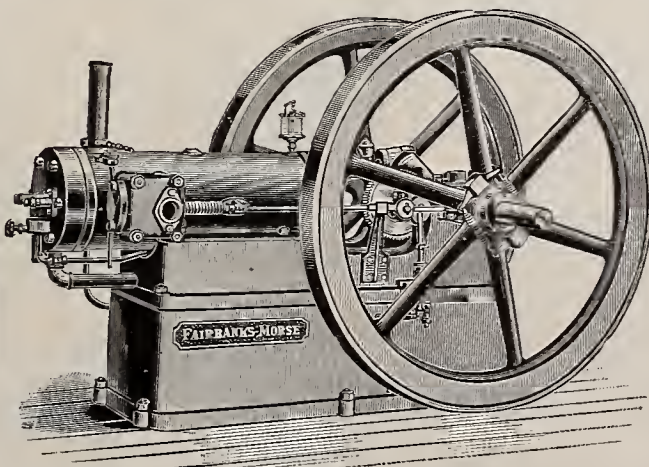
FAIRBANKS-MORSE Gasoline Engines

- - ARE LIKE - -

**FAIRBANKS SCALES,
Standard,
Durable,
Reliable.**

Thousands of the Scales and hundreds of the
Engines are used by the GRAIN TRADE.

**FAIRBANKS, MORSE & CO.,
CHICAGO.**



St. Louis, Minneapolis, Cincinnati, Cleveland, Kansas City, Indianapolis, Louisville, Omaha,
Portland, Ore., St. Paul, Denver, San Francisco, Los Angeles.

Send for Special Catalogue "G" showing plans for placing Engines in Elevators, Flour and Feed Mills, etc.

James Stewart & Co.,

ENGINEERS AND
CONTRACTORS FOR

Frame or Steel GRAIN ELEVATORS,

Railroad Work and Heavy Structures.

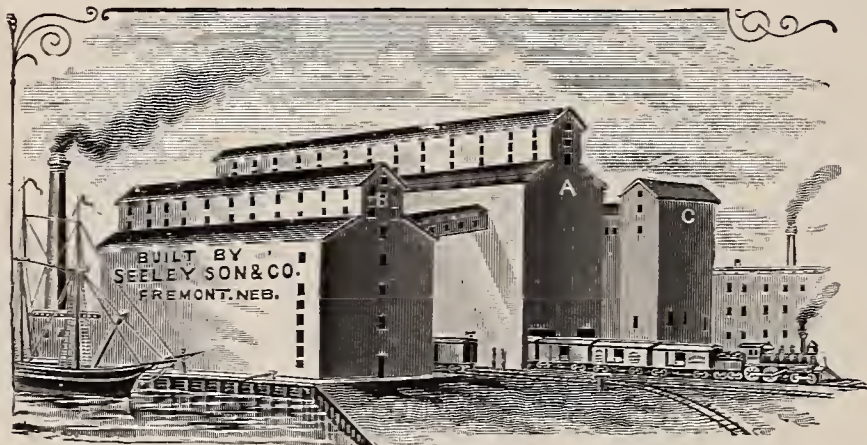
WE ALSO DESIGN AND BUILD PNEUMATIC & FLOATING ELEVATORS.

St. Louis and Buffalo.

We have built every elevator in New Orleans and Galveston. Also every elevator on the remaining Gulf Coast excepting one small one within the past twenty years.

SEELEY, SON & CO.,

Fremont, Neb.



Architects and Builders

OF ALL KINDS OF

GRAIN ELEVATORS.

WM. GRAVER TANK WORKS

MANUFACTURERS AND BUILDERS OF

Steel Storage Tanks AND STEEL ELEVATORS.

We Build Storage for Any Commodity
of Any Capacity.

GENERAL OFFICES:

790 OLD COLONY BUILDING, CHICAGO.



D. A. ROBINSON

Main Office: Auditorium Annex, Chicago.

Construction Office: Great Northern Steamship Docks, Buffalo, N. Y.



Designer and Builder of

GRAIN ELEVATORS, MALT HOUSES

And all Kinds of Heavy Construction.

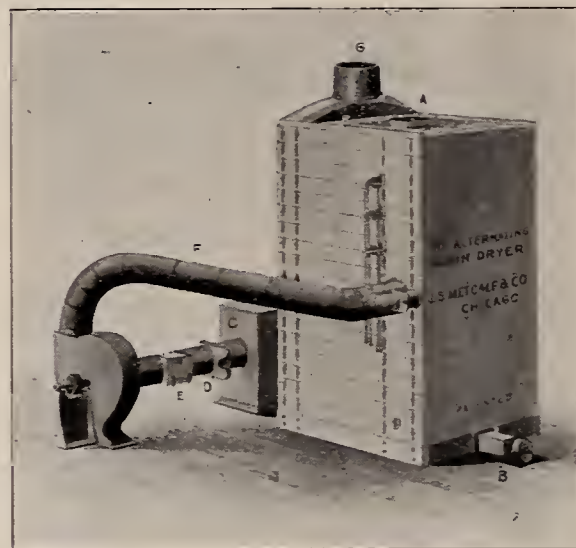
Patent System of Independent
Leg Rope Drive.

Patent Double-Jointed
Distributing Spouts.

Patent Automatic
Grain Belt Tripper

A PERFECT GRAIN DRYER.

Wet or Damaged Grain Restored to Grade.



WRITE FOR DESCRIPTIVE CIRCULAR.

JOHN S. METCALF & CO.,

Engineers,
Grain Elevator Builders,

1075 WEST 15TH STREET, CHICAGO.



GEO. M. MOULTON,
President.

THEODORE STARRETT,
Vice-President.

W. C. ENGLER,
Secretary.

J. M. WITHERSPOON,
Superintendent.

MOULTON-STARRETT CO.,

FISHER BUILDING, CHICAGO,

SUCCESSORS TO J. T. MOULTON & SON,

THE PIONEERS IN

GRAIN ELEVATOR CONSTRUCTION.

Architects and Builders of
Frame and Steel Grain Elevators.

THE BARNETT & RECORD COMPANY

DESIGNERS AND BUILDERS OF

Grain Elevators, Mills, Breweries and Malt Houses.

STEEL ELEVATORS A SPECIALTY.

We also contract to build complete all kinds of heavy structures, such as Docks, Packing Houses, Public Buildings, Stock Yards, Etc., Etc.



A Few Elevators Built by Us. Bu. capacity.
Portland El. Co., Portland, Me. 1,000,000
Maple Leaf Elevator, Kansas City, Kan. 1,000,000
Burlington Elevator, St. Louis. 1,300,000
Interstate Elevator Co., Minneapolis 1,000,000
Northern Grain Co., Manitowoc, Wis. 500,000
W. W. Cargill, Green Bay, Wis. 500,000
Vigo Elevator Terre Haute, Ill. 500,000
Belt Line Elevator Co., Superior, Wis. 2,500,000
Superior Terminal El. Co., Superior, Wis. 2,500,000
F. H. Peavey & Co., Minneapolis No. 1. 1,750,000
F. H. Peavey & Co., Minneapolis No. 2. 500,000
Atlantic Elevator Co., Minneapolis. 600,000
Empire Elevator Co., Minneapolis No. 1. 600,000
Empire Elevator Co., Minneapolis No. 2. 500,000

THE BARNETT & RECORD CO. has designed and built more than one thousand elevators with capacities varying from 20,000 to 2,500,000 bushels. Also a large number of docks, mills court houses, packing houses, hotels, the Cozad irrigation canal and other like improvements. As a result of this large experience, it has a thorough, first-class organization and equipment, enabling it to submit bids or execute work in the shortest time consistent with thoroughness

WRITE US FOR ESTIMATES. 604 CORN EXCHANGE, MINNEAPOLIS, MINN.
CHICAGO OFFICE, 541 ROOKERY.

TROMANHAUSER BROS.,

ARCHITECTS, CONTRACTORS, AND BUILDERS OF

GRAIN ELEVATORS.

COUNTRY, TRANSFER, MIXING, MARINE, AND
TERMINAL STORAGE ELEVATOR PLANTS.

Plans Submitted and Estimates Furnished.

316 New York Life Building, . . . MINNEAPOLIS, MINN.

WITH WHICH THIS PUBLICATION IS PRINTED
IS MADE BY THE
THE INK QUEEN CITY PRINTING INK CO.
SOUTH ST. CINCINNATI, O.

Macdonald Engineering Company,

CONTRACTING ENGINEERS,

Designers and Builders of Wood and Steel

GRAIN ELEVATORS

Any Capacity.

1454, 1455 and 1456 Monadnock Block, Chicago, Ill.

E. LEE HEIDENREICH,
Consulting Engineer.

DESIGNER AND
ARCHITECT FOR

GRAIN ELEVATORS

In Wood, Steel or Cement Construction.

ESTIMATES FURNISHED.
FIRE LOSSES ADJUSTED.

541 ROOKERY,
CHICAGO.

THE INCLINE ELEVATOR ^{and} DUMP



The farmer furnishes the power. Less than one-half the investment and one-quarter the expense of operating an ordinary elevator. Unexcelled for convenience and economy in handling ear corn as well as shelled grain, etc.
The Incline Elevator and Dump and plan of building have been greatly improved and are covered by U. S. patents. Write for prices and circulars.

H. KURTZ & SON, GREENFIELD, IOWA.



WHEN YOU WANT

Elevator or Mill
Supplies,

Cleaning Machines,

Feed Mills,

Corn Shellers,

Engines and Boilers,

Gasoline Engines,

Horse Powers,

WRITE TO

GREAT WESTERN MANUFACTURING CO.

General Office and Factory, LEAVENWORTH, KAN.

Warehouse and Salesrooms, 1221-1223 Union Ave., KANSAS CITY, MO.

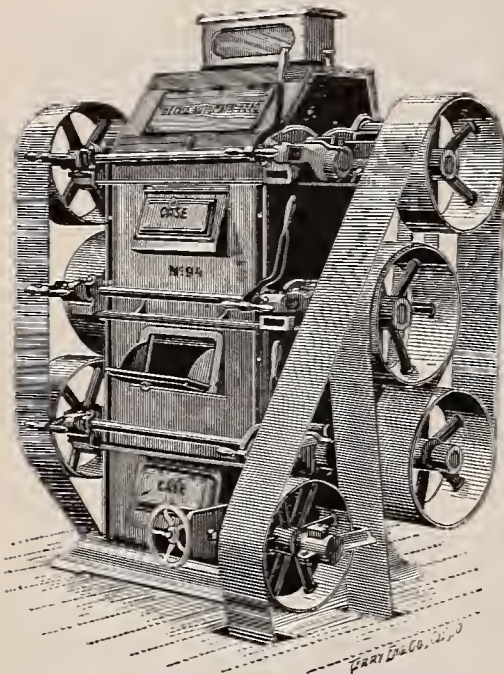
SEND FOR OUR ILLUSTRATED CATALOGUE.

Elevator Men,

Who put in a ROLLER FEED MILL last season, found it a profitable investment. Some Roller Feed Mills put in by elevator men have more than paid for themselves in one season. The demand for ground feed during the coming season promises to be even greater than during the last.

The Case Three-Pair High Corn and Feed Roller Mills

Are made in four sizes, and always do perfect work.



ONTARIO, IND., April 8, 1895.

The Case Manufacturing Co.,
Columbus, Ohio.

DEAR SIR:—We have the 9x18 Three-High roll running, and it is the best Feed Roll that I ever handled or saw. We can grind 60 to 65 bushels per hour with less than half the power that we used with the old stone.

She is a daisy. We have smiles all over our faces like a full moon. Now, if you want a statement regarding the roll, let me know, and will write you a good one. Everything all O. K. Yours respectfully,

M. S. MILLER.

We Keep a Full Line of
**ELEVATOR AND MILL SUPPLIES
AND MACHINERY.**

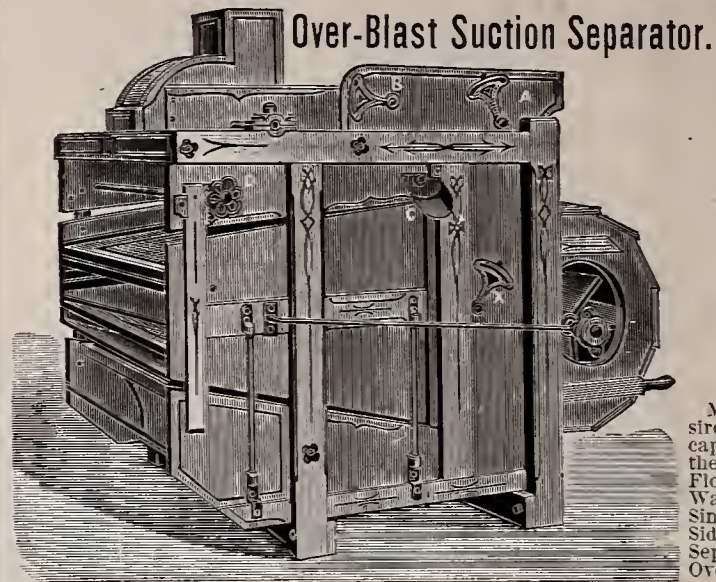
Grain Cleaners, Corn Shellers, Corn Cleaners and Scourers.

CORN MEAL BOLTS.

WRITE US FOR PRICES BEFORE BUYING.

THE CASE MFG. CO., COLUMBUS, OHIO.

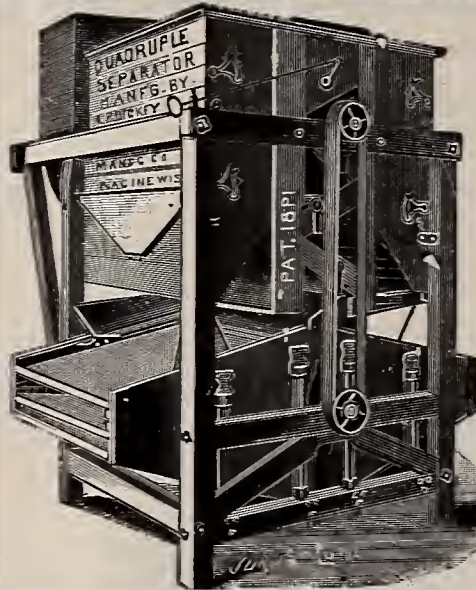
THE CELEBRATED A. P. DICKEY GIANT GRAIN CLEANERS.



**THE
STANDARD
IN THEIR
LINE.**

**“Grain
Cleaned
to a
Standstill.”**

Manufactured in any desired size and pattern, with capacities to accommodate the largest Elevator and Flouring Mills, or small Warehouses for hand use. Single and Double, End and Side Shake, and Dustless Separators, both Under and Over-Blast.



The Quadruple Suction Dustless Separator. Four separate suction, independent of each other, with sieves and screens, requiring less power, less floor space, lower in height, needing less bracing, has better and more perfect separations, and furnished with the only perfect force feed and mixer on the market. Guaranteed to clean Grain to any desired standard without waste once through this machine twice as well as any machine made.

For CIRCULARS and PRICES address

A. P. Dickey Mfg. Co.
RACINE, WIS.

THE CONTINENTAL HOTEL
IS THE ONLY FIRST CLASS HOTEL IN THE IMMEDIATE BUSINESS
AND AMUSEMENT CENTER OF THE CITY CONDUCTED ON THE
AMERICAN PLAN AT \$2.00 PER DAY
STEAM HEAT, PASSENGER ELEVATOR
AND OTHER MODERN CONVENIENCES.
TABLE AND SERVICE THE BEST.
ROOMS NEWLY AND NEATLY FURNISHED. THE NEXT TIME YOU ARE IN CHICAGO TRY
THE CONTINENTAL, YOU WILL FIND IT HOMELIKE AND COMFORTABLE.
CHAS. O. BLOOM PROPRIETOR.

WABASH AVENUE AND MADISON STREET CHICAGO, ILL.

THE SMITH PNEUMATIC TRANSFER AND STEEL STORAGE SYSTEM.

*Now in Successful Operation
at Toledo, Ohio.*

This is an entirely new and complete system for handling, treating and storing grain, seeds, millstuff, coal, sand, gravel, salt and other subdivided substances which can be handled in bulk, and the protection and preservation of cereals, seeds, vegetables, fruits, ensilage and fodder crops, cotton, wool and other fibers, tobacco, provisions and all perishable substances and valuable commodities in absolute safety from fire, water, air, storms, floods, microbes, insects, vermin, animals, thieves, evaporation, fermentation, oxidation or other causes of damage or destruction.

This system has nothing in common with other methods, but is entirely different and distinct, in construction, arrangement and operation, materials used, principles involved, and results obtained, from all others heretofore in use.

It is fully protected by 20 patents already issued, and others pending, in the United States and principal foreign countries.

It was on exhibition at the World's Columbian Exposition of 1893, and was awarded four highest medals and diplomas and received in addition thereto the highest indorsement of the principal officers of the Exposition as well as of the highest authorities in all industries to which it is applicable.

The title to all patents and other rights belonging to this system is vested in The Smith Pneumatic Transfer & Storage Co., and any infringement thereon will receive prompt attention.

The policy of the Company in regard to the introduction of its system is to make such liberal and easy terms with all who desire to use it that there will be no cause for complaint.

Full particulars furnished on application in person or by letter to

The Smith Pneumatic Transfer & Storage Co.,
1327 Manhattan Building,
315 DEARBORN ST., CHICAGO.

SEEDS

THE ALBERT DICKINSON CO

Timothy, Clovers, Flax, Hungarian, Millets, Red Top, Blue Grass,
Lawn Grass, Orchard Grass, Bird Seeds, Ensilage Corn,
Pop Corn, Buckwheat, Field Peas, etc.

OFFICES, COR. CLARK & SIXTEENTH STS., CHICAGO, ILL

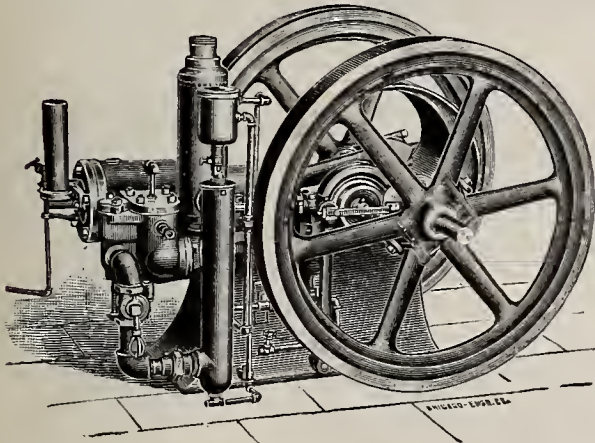


BELT CONVEYOR IN SOUTH CHICAGO ELEVATOR "C."

All Machinery Used in Elevators Furnished By

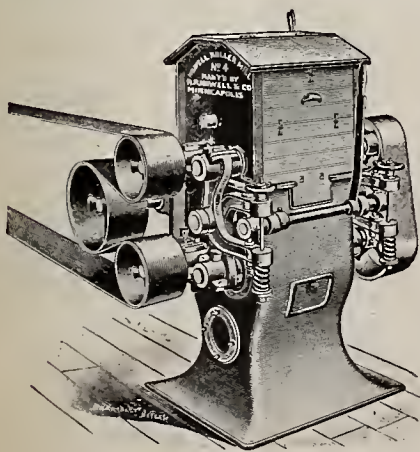
DODGE MANUFACTURING CO.,Send Specifications.
Write for Catalogue.

Mishawaka, Ind.

Racine Gas and Gasoline Engines.**BOTH HOT TUBE AND ELECTRIC SPARK IGNITION**Furnished with each engine. Racine engines are the result of **ten years'** experience in the manufacture of Gas and Gasoline Engines and embody only such methods and devices as are known to be the best for the purpose.

Simple in construction and operation, extremely economical.

Write for catalogue A and net prices.

RACINE HARDWARE CO.,
RACINE, WIS.**WE MANUFACTURE EVERYTHING ...**

Pertaining to Grain Elevators, including Roller Feed Mills, Power Corn Shellers, Crane Single and Double Gear Elevator Horse Power, the Minneapolis Horse Power, Engines, Boilers, Car Pullers, Power Grain Shovels, Elevator Boots, Grain Spouts, Pulleys, Shafting, Hangers, Boxes, Couplings, Link Chain, etc., etc.

Write for prices direct to the manufacturers,

R. R. HOWELL & CO., Minneapolis, Minn.

We can furnish our Ajax Transmission Rope in all lengths and sizes desired.

**H. CHANNON CO.,**

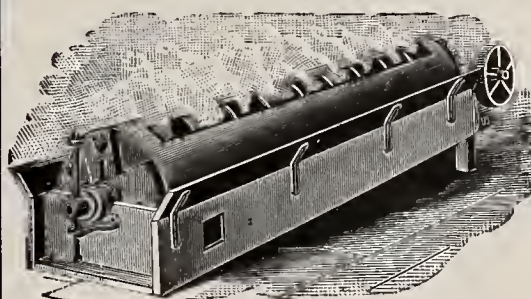
24-26 Market St., Chicago.

DAMP WHEAT can be PUT in CONDITION for GRINDING or STORAGE

By using our

STEAM DRYER,

Which is also a successful Wheat Heater or Temperer or Dryer for Washed Wheat or Bran.



It leaves the Wheat in Perfect Condition for the Rolls. Will also dry Malster's, Brewer's and Distiller's Wet Grain.

Not an Experiment. In successful use 25 years drying

CORN MEAL AND HOMINY.**BREWERS' GRITS AND MEAL.****BUCKWHEAT, RICE AND****ALL CEREAL PRODUCTS.****ALSO SAND, COAL DUST, GRAPHITE AND CLAY AND ORE OF ALL KINDS!**

Automatic in operation, requiring no attention. Double the capacity of any other Dryer sold for same price.

THE CUTLER CO., North Wilbraham, Mass.**THE OLD WAY.****For NEW and BEST Way**

ADDRESS

UNION IRON WORKS,**DECATUR, ILL.,**

Manufacturers of the CELEBRATED

Western Shellers and Cleaners

The "Best in the World."

Elevator Supplies of All Kinds a Specialty.

We are the Pioneer Elevator Builders of the West, and claim priority in the building of Cheap Elevators with Increased Conveniences. Don't BUILD until you get our Plans and Prices.

Write for Catalogue.

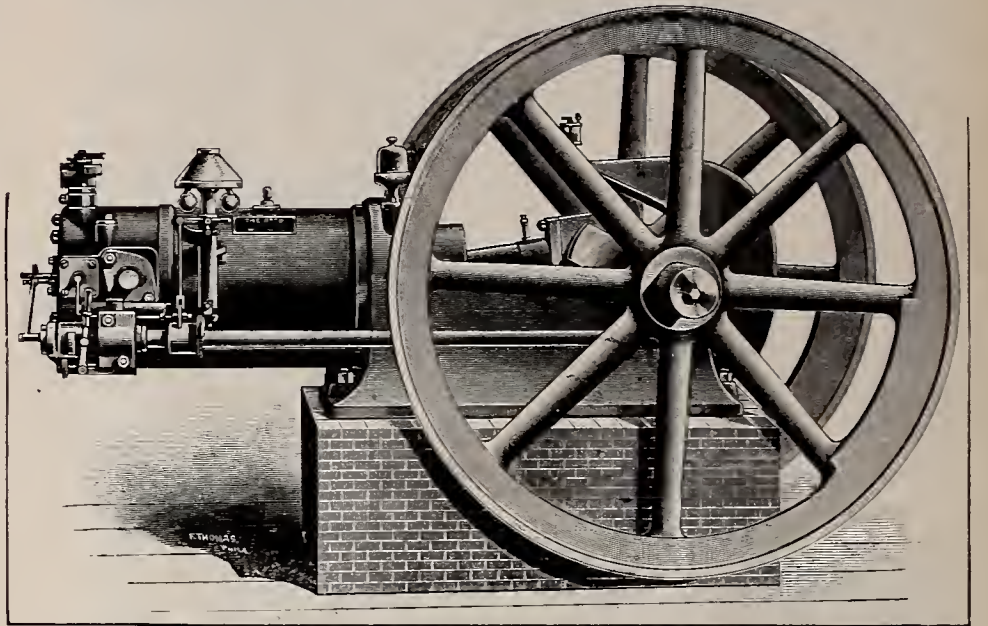
THE "OTTO" CASOLINE ENGINES.

STATIONARY, PORTABLE AND MARINE.

SIMPLEST IN CONSTRUCTION,
SAFEST AND EASIEST TO OPERATE,
SUREST TO GIVE SATISFACTION.

50,000 OTTO'S IN USE.

OFFICES: { 245 Lake Street, CHICAGO.
321 S. 15th Street, OMAHA.
212 Nicollet Avenue, MINNEAPOLIS.
35 E. Ohio Street, INDIANAPOLIS.



Factory: THE OTTO GAS ENGINE WORKS, PHILADELPHIA.

\$2.00 \$2.50 \$1.00



PUBLISHED THE FIRST DAY OF EVERY MONTH.

ESTABLISHED IN 1873.

The Best Exponent of Modern Milling.

SUBSCRIPTION PRICE,

\$2.00 PER YEAR.

Each number is worth the cost of an entire year's subscription to every man in the trade.

SEND FOR SAMPLE COPY.

ADDRESS

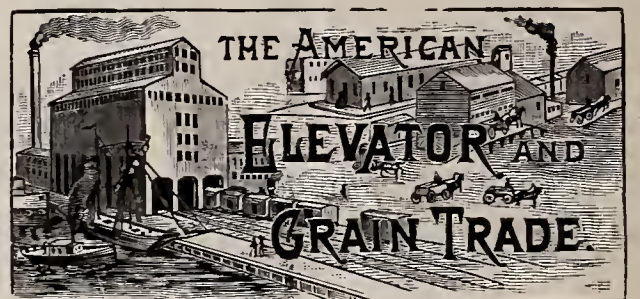
— FOR —

BOTH
FOR ONE YEAR.

You can get such value nowhere else for your money. Many readers want a paper that comes twice a month. THE AMERICAN MILLER and THE ELEVATOR are offered at less than such a paper could be given for. You need them both in your business.

\$2.50

Two Papers a Month.



PUBLISHED THE FIFTEENTH OF EVERY MONTH.

ESTABLISHED IN 1882.

Subscription Price, Only \$1.00 Per Year.

Each Number Contains 44 Pages of Valuable Matter.

THE AMERICAN ELEVATOR AND GRAIN TRADE is the only paper of its class in the field.

Mitchell Bros. Co.

PUBLISHERS,

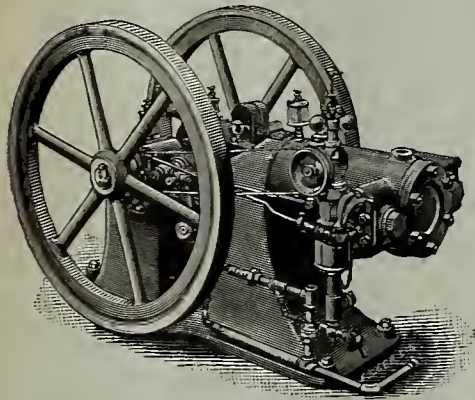
184 & 186 Dearborn St., CHICAGO, ILL.

AMERICAN ELEVATOR AND GRAIN TRADE.

SEEDS

Grain, Clover and Grass Seeds,
CHAS. E. PRUNTY,
MAIN & MARKET SAINT LOUIS.

THE SUMNER GAS AND GASOLINE ENGINES.

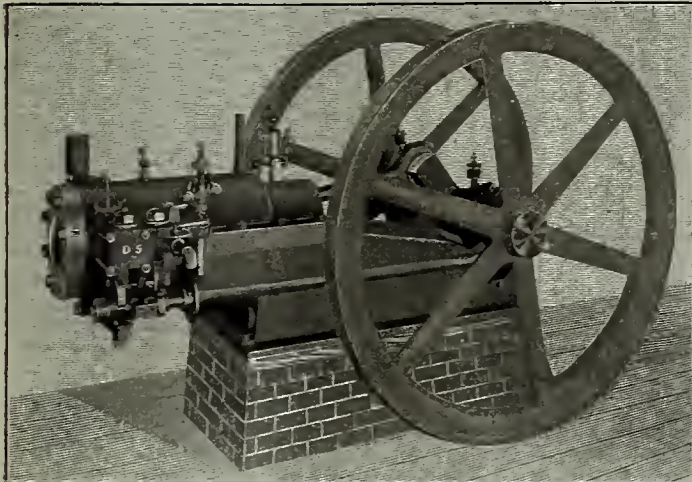


The NEW IMPROVED SUMNER ENGINE is up to date in every respect. It is not excelled in any particular by any engine on the market. In several important points it leads all others. One of the most important of all is its Electro Magnet for the Explosion of Gas. Satisfaction guaranteed and each Engine warranted. Get our prices and we will get your business. Correspondence solicited.

THE F. M. WATKINS CO.,
MANUFACTURERS,
S. E. Cor. Baymiller and Sixth Sts.,
CINCINNATI, O.

Northwestern Agent: C. A. Ames, 405 Sixth Ave. South, Minneapolis, Minn.

"NEW ERA" GASOLINE ENGINE.

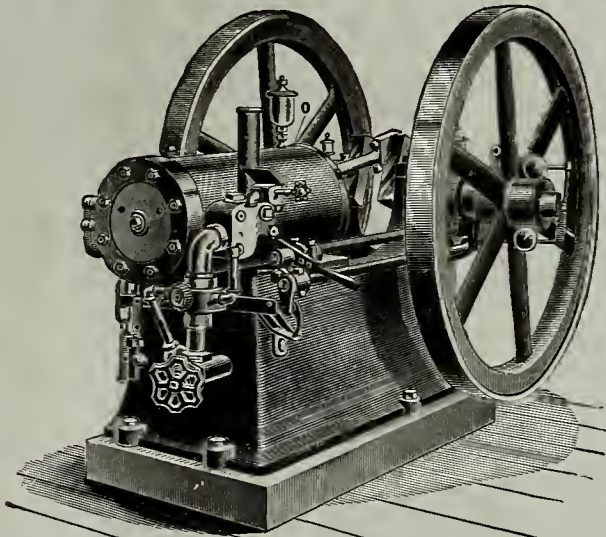


Easy to Start.
Easy to Operate.
Vertical Poppet Valves.
Electric or Tube Igniter.
Any working part removed for cleaning or repairing without disturbing other parts.
Heavy and substantial. First class throughout.
Thoroughly Guaranteed.
Sizes 10 to 60 H. P.

For Catalogue and Prices address
NEW ERA IRON WORKS, 30 WAYNE AVE., DAYTON, OHIO.

THE LATEST WEBSTER HORIZONTAL ENGINE

GAS GASOLINE



WEBSTER MANUFACTURING COMPANY,
SOLE MAKERS,
1077 WEST 15TH ST., CHICAGO.

Write for handsome new catalogue.

NEVER A PEER



The Salem Bucket has had imitators, but never an equal. The most ever claimed by competing buckets is that they "are as good as the Salem." We fixed the standard to which others aspired, but the Salem is now, as it always has been, incomparably the

BEST BUCKET MADE.

The BEST is what you want. It is the cheapest and most satisfactory in the end. Besides, the Salem is sold as low as other buckets.

ALL KINDS OF SHEET AND PLATE METAL WORK.
THE W. J. CLARK CO., Salem, Ohio, U. S. A.

Hicks Improved Gas and Gasoline Engines.

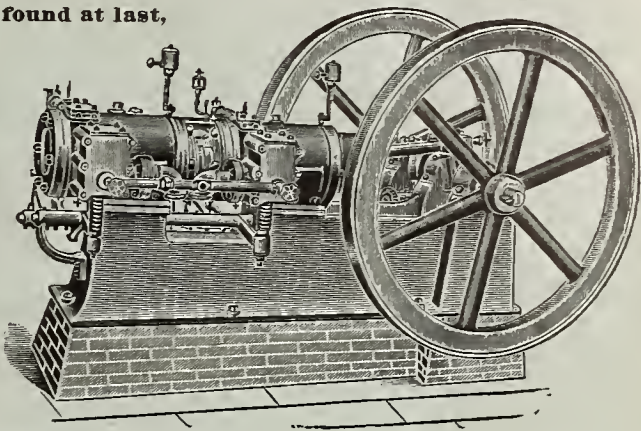
The long-sought-for found at last,
AN IMPULSE WITH EVERY
TURN OF THE CRANK,

Thereby doubling the power of the engine and insuring a perfect steady motion, adapted to all kinds of work, especially where steady and reliable power is required, such as electric light and mill work.

Every engine guaranteed to work as represented, and to be the best of its kind on the market.

Send for catalogue and prices to the

FRONTIER IRON WORKS
(Sole Manufacturers),
Detroit Gas Engine Co.,
DETROIT, MICH.

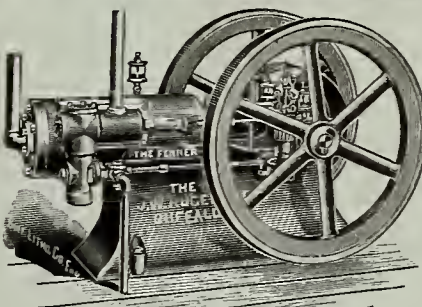
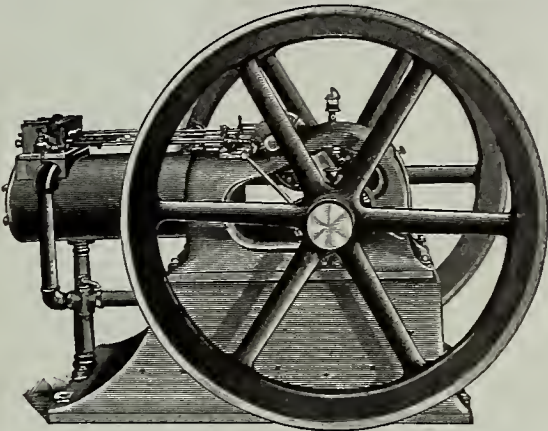


The Dayton Gasoline Engines.

2 TO 50 H. P.

Manufactured by

**THE DAYTON GAS
ENGINE & MFG. CO.,**
DAYTON, OHIO, U. S. A.



5 H. P.

The New 1897 Gas and Gasoline Engines

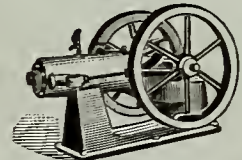
As turned out by us are as near perfection as has yet been attained. They are extremely simple and most effective.

THE FIRE RISK is minimized in elevators and flour mills when these engines are used. Always ready to start for a long or short run. Write us for proposition, stating size required and whether for gas or gasoline.

Our new catalogue is just out of press and we will be pleased to send you copy.

Mention American Elevator and Grain Trade.

The J. W. Ruger Mfg. Co., 214-222 Chicago Street, Buffalo, N. Y.



GASOLINE ENGINES

Are the best and cheapest power for Elevators, Conveyors, Feed Mills, Corn Shellers, Etc. Catalogue Free.

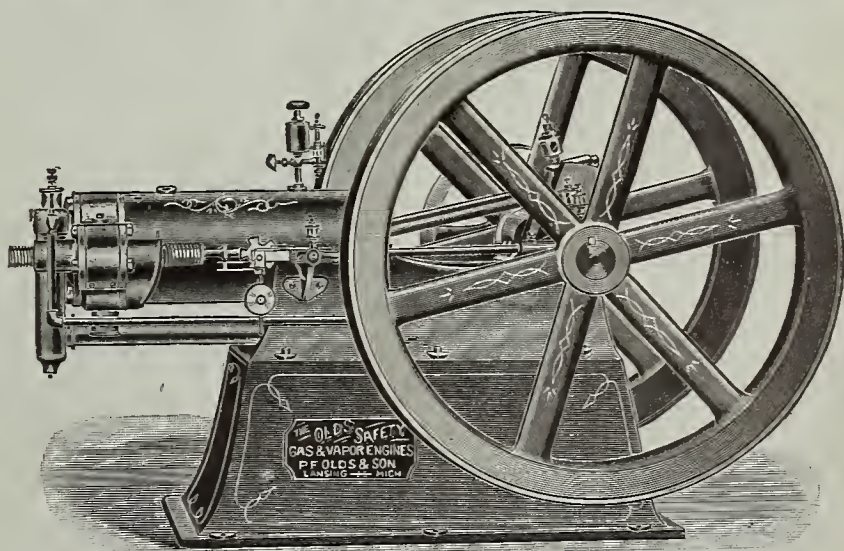
The Van Duzen Gasoline Engine Co.,
CINCINNATI, OHIO.



PROUTY Electro-Gasoline Engine

2 to 50 H. P.
Runs without smoke, odor or noise. Special styles for Electric Lighting, Boats, Mining Locomotives, Hoists, Portable Threshing, Pumping, Farm and Dairies, Inspection and Street Cars, Road Wagons, Printing Offices and all stationary purposes. All engines guaranteed and may be returned at our expense if not as represented. **THE PROUTY CO.,** 79 Dearborn St., CHICAGO, U.S.A.

OLDS Gas and Gasoline ENGINE



The engine that has no gears or levers, simplest carbureter, wonderful economy. Twelve years of gas engine experience is the reason. Know the requirements of a gas engine.

P. F. OLDS & SON,
The Gas Engine Builders,
Box 423, LANSING, MICH.

AMERICAN ELEVATOR AND GRAIN TRADE.



ELEVATING AND CONVEYING APPLIANCES.



Webster Spiral Conveyor,
Elevator Buckets,
Elevator Boots
Belt Conveyors,
Friction Clutches.



Power Grain Shovels,
Car Loading Spouts,
Rope Drives,
Gas Engines,
Chain Belting.



WEBSTER MFG. CO.



OFFICE AND WORKS: 1075-1097 WEST 15th ST., CHICAGO.



Gasoline go as far and **DO AS MUCH WORK** used in the

CHARTER

as five to twelve in other engines, for all its expansive force is utilized.

CHARTER GAS ENGINE CO., 400 Locust St., Sterling, Ill.

WAGON, HOPPER, PORTABLE AND DUMP SCALES.

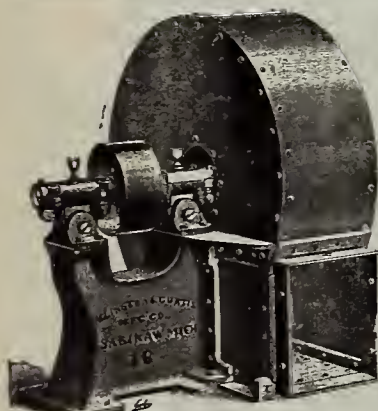
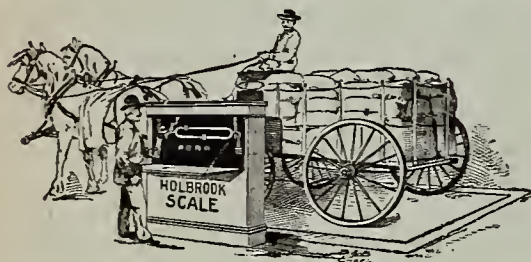
Elevator Machinery of Every Description.

WESTERN AGENTS FOR THE

Charter Gasoline Engines.

Write for prices. Address

C. D. Holbrook & Co.,
305 3d St. So., Minneapolis, Minn.



Fans and Dust Collecting Systems

FOR

Elevators.

COLLECT YOUR DUST AND SAVE EXPLOSIONS.

The Allington & Curtis Mfg. Co.

SACINAW, MICH.



WELLER CONVEYOR.

Elevator Buckets,
Elevator Boots,
Power Grain Shovels,
Trippers,
Car Pullers,
Loading Spouts,
Belting, Etc., Etc.



Pulleys,
Rope Sheaves,
Shafting,
Hangers,
Clutches,
Sprocket Wheels,
Link Belting, Etc., Etc.

WRITE FOR GENERAL CATALOGUE NO. 12.

Estimates given on Complete Grain Elevator Equipments.

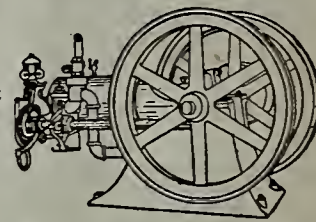
WELLER MFG. CO. Office: 118 and 120 North Avenue, Chicago.



LAMBERT GAS and **ENGINES**
GASOLINE 2 to 100 H.-P.

If you want the Best Buy the Lambert. It's the Cheapest Because the Best. It's the Best Because most Reliable, Durable, Economical, and Efficient and is not an experiment.

The Lambert Gas & Gasoline Engine Co.,
720 W. Third St., Anderson, Ind.

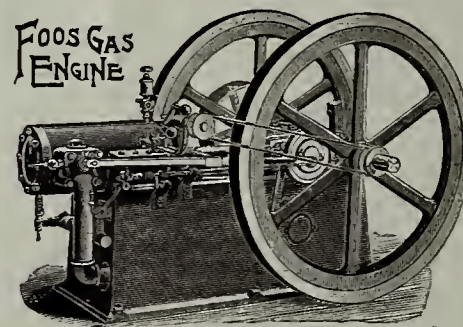


MANUFACTURERS OF ALL KINDS OF BAGS

GRAIN BAGS

AND BAGS FOR MILLERS USE A SPECIALTY.
MILWAUKEE BAG CO. MILWAUKEE, WISCONSIN.

THE NEW FOOS GAS and **ENGINE.**
GASOLINE

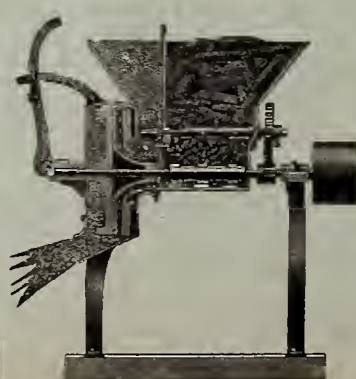


We can furnish Engines from 2 to 100 horse power. that are reliable and economical. Cost of operating Gasoline Engines, one cent per horse power per hour.

We furnish free with every engine an Electric Battery to explode the gas, that will last four months without any attention, then it can be renewed and will last four months more and so on for all time.

We do not use a red hot tube to explode the gas, that has to be replaced with a new one almost daily.

THE FOOS GAS ENGINE CO., SPRINGFIELD, OHIO.



GRINDING MILLS

This cut shows our **INVINCIBLE GRINDER**, the only mill made that grinds two kinds of grain at the same time. Our catalogue shows a full line of Elevator Machinery and Supplies and **17 DIFFERENT KINDS OF GRINDING MILLS.**

W. W. Stephens & Co.,

133-135 S. CLINTON ST., CHICAGO, ILL.